

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

NEW ENGLAND CARPENTERS HEALTH
BENEFITS FUND, PIRELLI ARMSTRONG
RETIREE MEDICAL BENEFITS TRUST,
TEAMSTERS HEALTH & WELFARE FUND
OF PHILADELPHIA AND VICINITY,
PHILADELPHIA FEDERATION OF
TEACHERS HEALTH AND WELFARE FUND,
DISTRICT COUNCIL 37, AFSCME -
HEALTH & SECURITY PLAN; JUNE SWAN;
MAUREEN COWIE and BERNARD GORTER,

Plaintiffs,

v.

FIRST DATABANK, INC., a Missouri
corporation, and McKESSON CORPORATION,
a Delaware corporation,

Defendants.

Civil Action: 1:05-CV-11148-PBS

Judge Patti B. Saris

EXPERT REPORT OF ROBERT D. WILLIG

[REDACTED VERSION]

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New England Carpenters Health Benefits Fund, et al. v. First DataBank, Inc. and McKesson Corporation

Expert Report of Robert D. Willig

January 24, 2007

I. QUALIFICATIONS

1. My name is Robert D. Willig. I am Professor of Economics and Public Affairs at the Woodrow Wilson School and the Economics Department of Princeton University, a position I have held since 1978. Before that, I was Supervisor in the Economics Research Department of Bell Laboratories. My teaching and research have specialized in the fields of industrial organization, government-business relations, and welfare theory.

2. I served as Deputy Assistant Attorney General for Economics in the Antitrust Division of the U.S. Department of Justice from 1989 to 1991. I also served on the Defense Science Board task force on the antitrust aspects of defense industry consolidation and on the Governor of New Jersey's task force on the market pricing of electricity.

3. I am the author of *Welfare Analysis of Policies Affecting Prices and Products*, *Contestable Markets and the Theory of Industry Structure* (with William Baumol and John Panzar), and numerous articles, including "Merger Analysis, IO Theory, and Merger Guidelines." I am a co-editor of *The Handbook of Industrial Organization*, and have served on the editorial boards of the *American Economic Review*, the *Journal of Industrial Economics* and the MIT Press Series on regulation. I am also an elected Fellow of the Econometric Society.

4. While at Bell Laboratories, and after, I developed and applied research and expertise on market structure, contractual relations, and optimal pricing of telecommunications services. After leaving Bell Labs I have been a consultant to firms in various sectors of the economy, including the health care and pharmaceutical sectors. I have studied and testified about levels and changes in levels over time of various pharmaceutical prices, as well as forms of

contractual agreements governing pharmaceutical and medical device market structure and pricing. I have researched and consulted on optimal contract structures and pricing patterns for electricity and gas and oil pipelines. I have consulted and testified on contract provisions governing allocations of revenues and costs over time for commercial aircraft, hotels, air-to-air missiles, and infrastructure privatization projects. I have consulted and testified on antitrust issues including horizontal mergers, vertical mergers, allegedly monopolizing conduct and allegedly collusive conduct in a host of industries, including pharmaceuticals and medical devices. On other matters, I have worked as a consultant with the Federal Trade Commission, the Organization for Economic Cooperation and Development, the Inter-American Development Bank, the World Bank, and various private clients. I serve as an independent contractor to Competition Policy Associates (“COMPASS”), an economic consulting firm with offices in Washington, DC, San Francisco, CA, and Los Angeles, CA. A list of my articles and other professional publications and activities is presented in my curriculum vitae. My *curriculum vitae* is attached as Exhibit 1.

II. INTRODUCTION AND SUMMARY OF CONCLUSIONS

5. Plaintiffs contend that First DataBank, Inc. (“FDB”) and McKesson Corporation (“McKesson”) engaged in a scheme to increase the spread between average wholesale price (“AWP”) and wholesale acquisition cost (“WAC”) on certain prescription drugs, beginning in late 2001, causing artificial inflation in AWP and leading members of two proposed classes to make “excess payments” for those drugs.¹ The first proposed class is defined as a third-party

1. New England Carpenters Health Benefits Fund, et al v. First DataBank, Inc. and McKesson Corporation, United States District Court, District of Massachusetts, C.A. No. 1:05-CV-11148-PBS, Second Amended Class Action Complaint, November 30, 2006 (“Complaint”), ¶1. Unless otherwise specified, I use the term “drugs” in this report to refer to self-administered brand-name prescription drugs.

payors ("TPP") class consisting of "[a]ll third party payors whose pharmaceutical payments for the Marked Up Drugs were based on AWP during the Class Period." The second proposed class is defined as a "consumer purchasers" class consisting of "[a]ll individual persons who paid, or incurred a debt enforceable at the time of judgment in this case to pay, a percentage co-payment for the Marked Up Drugs during the Class Period pursuant to a plan with a third-party payor whose pharmaceutical payments for the Marked Up Drugs were based on AWP during the Class Period."² . The "Marked Up Drugs" are defined as brand-name, self-administered drugs identified in Exhibit A of the Complaint and sold through retail pharmacies, including mail order.³ TPPs are defined as "self-insured employers, health and welfare plans, health insurers and other End Payors of prescription drugs."⁴ TPPs include employers, unions and insurance companies. The Class Period is defined as August 1, 2001 to March 15, 2005.⁵ In short, plaintiffs claim is that the change in the AWP/WAC ratio from 1.20 to 1.25 for Appendix A drugs artificially inflated AWP, increasing TPP reimbursements without any offsetting market adjustments for a period of over 3.5 years.

6. Plaintiffs have retained Raymond S. Hartman "to analyze whether causation, liability and injury can be proven on a class-wide basis...to evaluate whether aggregate injury to

2. Plaintiffs' Amended Motion for Class Certification, December 20, 2006, ¶2.

3. The Marked Up Drugs are listed by national drug code ("NDC") in Exhibit A of the Complaint, labeled "Appendix A Drugs by NDC". Although plaintiffs have modified Appendix A periodically, for purposes of this report, I use the term "Appendix A drugs" to refer to the NDCs listed in the latest version of Appendix A, currently the version filed on December 1, 2006.

4. Complaint, ¶1.

5. Plaintiffs' Amended Motion for Class Certification, December 20, 2006, ¶3.

the Class can be measured and to identify possible formulaic methods for that measurement.”⁶ Among other things, Dr. Hartman concludes that “[c]lass-wide analysis is feasible and the most effective way of demonstrating impact, corroborating liability and measuring damages.”⁷ In addition, Dr. Hartman provides a formula for aggregate damages.⁸

7. I have been asked by counsel for McKesson to analyze whether Dr. Hartman has presented an economically appropriate methodology for determining impact on a class-wide basis. In addition, I have been asked to evaluate whether impact and individual damages can be determined on a class-wide basis.⁹

8. The principal allegations that I assume are true for purposes of my analysis are the following:

-
6. Declaration of Raymond S. Hartman in Support of Plaintiffs’ Motion for Class Certification, July 14, 2006, and Updated Declaration of Raymond S. Hartman in Support of Plaintiffs’ Motion for Class Certification, December 20, 2006. (“Hartman Declaration”), ¶ 6. Dr. Hartman’s updated declaration appears to be identical to the original Hartman Declaration other than ¶5 where he defines the additional Class of consumer purchasers. Apparently, Dr. Hartman was also asked to provide certain opinions on impact. For example, Dr. Hartman states (at ¶6), “I have been asked by Counsel to evaluate the effects Defendants’ activities (if proven as alleged in the *Complaint*) had on members of the Class.” Dr. Hartman states his conclusion on this question in the Executive Summary, “I have analyzed whether the members of the proposed Class of payors identified in the Plaintiffs’ Complaint have been impacted, injured and damaged economically as a Class as a result of the alleged Five Percent Spread Scheme. I conclude that they were for the following reasons...”
 7. Hartman Declaration, ¶15.
 8. Hartman Declaration, ¶22.
 9. For purposes of my analysis, I assume that the factual allegations contained in the Complaint concerning the alleged scheme to increase the markup in FDB’s published AWP’s are true. This does not mean that I assume that every statement contained in the Complaint is true. In particular, it would be inappropriate to assume that statements regarding the impact of the alleged misconduct are true because that is precisely the question that must be addressed for purposes of determining whether liability, impact and damages can be determined on a class-wide basis.

- McKesson and FDB conspired to increase the AWP/WAC ratio contained FDB's Blue Book from 1.20 to 1.25.¹⁰
- The increase in the AWP/WAC ratio caused artificial inflation in AWP beyond the inflation in WAC.
- The alleged scheme began in August 2001 and ended on March 15, 2005.

9. My conclusions can be summarized as follows:

- The alleged scheme was not about actual prices paid by most putative class members, but rather about AWP, which itself is not an actual price paid by most members of the putative class. The difference between the actual prices paid and AWP is determined by many different factors; these factors differ for particular members of the putative class. Importantly, these factors are apt to change if AWP is made to change artificially. (See Section IV)
- Dr. Hartman assumes that when the AWP/WAC ratio increased, *all* other pricing factors remained the same and that *all* other contract terms remained unaffected by the alleged scheme. Such an assumption is wholly inconsistent with economic theory and the available evidence. (See Section IV)
- As shown throughout this report, the empirical evidence shows that the factors driving the difference between AWP and actual prices did change during the class period, and did so on an individual, not class, basis. Since the actual prices paid by putative class members did not change in unison in reaction to the alleged scheme, individualized inquiries are needed to ascertain whether different TPPs' actual prices changed at all, and if so by how much. (See Section IV)
- There is a significant amount of empirical evidence, which is consistent with economic theory, that the TPPs had a wide variety of mechanisms to protect themselves from an artificial rise in some AWP levels, and that individual TPPs used different means to counteract the artificial rise in some AWP levels resulting from the alleged scheme. For example, if AWP rose by \$1 and the

10. FDB actually transmits the AWP/WAC markup data electronically through the National Drug Data File ("NDDF"). I use the term "AWP/WAC ratio" to refer to the markup of AWP over WAC. Under this convention, if the markup is 20 percent of WAC, then the AWP/WAC ratio is 1.2 ($(\text{AWP} - \text{WAC})/\text{WAC} = 0.20$ implies $\text{AWP}/\text{WAC} - 1 = 0.20$, or $\text{AWP}/\text{WAC} = 1.2$). Similarly, a 25-percent markup means that the AWP/WAC ratio is 1.25. This way the relationship between the two prices is expressed as a ratio. For example, if WAC is \$80 and AWP is \$96 for a particular drug, then the markup of AWP over WAC is \$16 which is 20 percent of WAC and therefore the AWP/WAC ratio is 1.2. If the markup increased to 25 percent of WAC and WAC was unchanged, then AWP would increase to \$100 to generate $\text{AWP}/\text{WAC} = 1.25$.

TPP was able to negotiate an extra \$1 of discounts or rebates, the actual price paid did not change and no harm was suffered by the TPP or any other consumer. (See Section V)

- Moreover, in addition to discounts and rebates, there were other mechanisms available to the TPPs to defend themselves from the rise in the AWP/WAC ratio: certain TPPs had “self adjusting” or “pass through” contracts. Other TPPs altered their dispensing fees, while others changed their co-pay or engaged in other forms of cost-shifting. (See Section V)
- Since TPPs utilized different market mechanisms to counteract the rise in the AWP/WAC ratio, it follows that Dr. Hartman is incorrect in his key assumption that TPPs were all affected in similar ways.
- As a result, whether and the degree to which an individual TPP was affected by the change in AWP depends on an individuated analysis of how these mechanisms changed on a TPP-by-TPP basis. Dr. Hartman has failed to undertake such an analysis and consequently his conclusions are fundamentally flawed.

10. My conclusions are based on my experience and expertise as an economist and my review of documents and data. Exhibit 2 is a list of documents and data that I have reviewed in forming my conclusions. If additional materials are made available, I may modify or update my conclusions.

11. The remainder of this report is organized as follows. Section III contains a summary of my understanding of the industry background most relevant to this matter. In Section IV, I analyze Dr. Hartman’s critical assumption that a change in the markup of AWP over WAC, two artificially constructed price measures, does not cause any changes in other pricing factors. Section V contains a discussion of the particular pricing factors and contract terms that Dr. Hartman assumes are unaffected by the alleged scheme for the whole Class Period. In Section VI, I show that Dr. Hartman’s aggregate damages formula will be inadequate and biased if his critical assumption fails, which the facts show it does, indicating that the formula provides no reliable basis for determining or proving class-wide impact. Section VII summarizes my conclusions.

III. BACKGROUND

12. In this section, I summarize my understanding of key economic relationships in the business of distribution of self-administered branded prescription drugs. As the industry is quite complex, the goal is to focus attention on just those aspects of the industry that bear on the current litigation.¹¹ I begin with an overview of the chain of distribution. I then describe the PBM agreements with retail pharmacies and the PBM agreements with TPPs. Finally, I discuss the two artificially constructed price measures that are the subject of this litigation – AWP and WAC. Although this discussion applies to the overall drug distribution business, I focus on self-administered branded prescription drugs.¹²

A. Chain of Distribution

13. The basic structure of relationships can be characterized by a fairly straightforward flow chart illustration. See Figure 1. Manufacturers sell drugs to wholesalers and are paid on the basis of WAC. Wholesalers sell drugs to retail pharmacies, also receiving payment on the basis of WAC plus or minus a factor that generates a margin for wholesalers. Retail pharmacies agree to prices (or reimbursement rates) for drugs typically through negotiation with PBMs, who in turn agree to reimbursement rates with TPPs through negotiation. However, in some instances (designated with a dotted-line in Figure 1) the TPP actually takes on some or all of the functions of a PBM and negotiates directly with pharmacies for reimbursement rates. The reimbursement rates, negotiated in the retail pharmacy-PBM contracts, pharmacy-TPP contracts and the PBM-TPP contracts, often are stated as AWP minus a percentage

11. For additional background on the use of pricing benchmarks in the drug industry, see Report of Independent Expert Professor Ernst R. Berndt to Judge Patti B. Saris, February 9, 2005, (“Berndt Report”) In Re Pharmaceutical Industry Average Wholesale Price Litigation, MDL No. 1456 (“AWP MDL”).

12. Unless I indicate otherwise, all references to “drugs” in this report indicate self-administered branded prescription drugs.

discount. TPPs provide prescription drug benefits as part of health insurance provided to their members. Members of insurance company TPPs pay the TPPs through premiums. In addition, TPP members share in the payment of reimbursements through co-payments and co-insurance.¹³ Plaintiff TPPs also include union health and welfare funds, which receive payments from employers under collective bargaining agreements. These payments cover various benefits, including prescription drug benefits under contracts between the funds and PBMs.

14. One unique characteristic of this industry is the role of PBMs. They generally do not take control of any drugs, but rather serve as a negotiating agent between TPPs and other parties.¹⁴ Similarly, TPPs do not take control of any drugs, but they pay for the drugs on behalf of their members. PBMs represent a step on the vertical chain, facilitating the contracting of drug benefits between pharmacies and TPPs (on behalf their members) and being compensated for this intermediary service. As I explain below in Sections IV and V, PBMs' roles as intermediaries make it unlikely that an artificial increase in AWP would persist without reactions with pricing moves that would be offsetting or entirely counteracting to some or all TPPs and final consumers.

15. PBMs receive compensation primarily through some combination of three principal methods, but not necessarily all three: (1) marking up the price of the drugs to TPPs over the price charged to them by retail pharmacies; (2) charging fees to TPPs; (3) receiving

13. Co-payments are typically flat dollar payments (\$5, \$10, \$20) made by TPP members. Co-insurance payments are typically payments made by TPP members that are a percentage of the total drug cost. Consumers who made co-insurance payments are part of the class in this case; consumers who made co-payments are not.

14. As I mentioned above, some TPPs do not use PBMs, but choose to negotiate with pharmacies and other parties on their own behalf. These integrated TPPs compete directly with more traditional PBMs. Similarly, as I explain below in Section V, some PBMs are vertically integrated to the retail pharmacy level through their mail order business (e.g., Medco).

rebates from manufacturers in return for placement of drugs on “formularies” and other incentives. The direct relationship between manufacturers and PBMs (and some TPPs) is a somewhat unique characteristic of the industry.¹⁵ As part of their pharmacy benefit management services (between pharmacies and TPPs), PBMs develop formularies that list preferred drugs for those cases when substitution between competing drugs is medically acceptable. Manufacturers negotiate with PBMs to place their drugs on formularies. A common tool in this negotiation is the payment of rebates by manufacturers to PBMs. The rebates may take the form of a flat payment per unit, a percentage of WAC or a percentage of AWP on the drugs listed on the formulary. The manufacturer’s net revenue per unit, equal to WAC less all discounts and incentives to wholesalers and rebates to PBMs, is commonly referred to as average selling price (“ASP”).

16. Consumers are members of TPPs, generally through employers or unions. Consumers pay premiums for health coverage. If the employer or union contracts with an external TPP, it pays a fee based on the number of covered employees. Part of the coverage is the prescription drug benefit, which says the TPP will pay for the drugs, except for the co-pay or co-insurance that the member must cover. Co-pay terms can vary within a TPP by drug depending on whether a drug is brand-name or generic and whether the drug is on a formulary. Similarly, TPPs can vary co-pays with a plan as a way to incentivize the consumer to use a pharmacy within the PBM’s network.

15. Some TPPs develop their own formularies and negotiate rebates directly from manufacturers in exchange for steering their members to particular branded drugs. Harvard Pilgrim, [REDACTED], and Select Health are all examples of large PBMs that negotiate directly with manufacturers for drug rebates. See depositions of Andrea Grande, Harvard Pilgrim, October 11, 2006 (“Grande (Harvard Pilgrim) Deposition”), p. 24; James Kenney, Harvard Pilgrim, October 11, 2006 (“Kenney (Harvard Pilgrim) Deposition”), pp. 7-8; Eric Cannon, Select Health, October 11, 2006 (“Cannon (Select Health) Deposition”), p. 10; and [REDACTED] pp. 11-12.

17. The TPP's costs from branded prescription drug benefits are determined by (1) AWP, (2) the discount off AWP, (3) the dispensing fee, (4) the portion of the drug cost that is covered directly by TPP members (co-pay or coinsurance), and (5) other fees paid to PBMs for their services. TPP revenue is determined by (6) rebates paid by manufacturers to PBMs and passed on directly or indirectly to TPPs (or at times paid directly by manufacturers to TPPs), (7) the percentage of manufacturers' rebates to PBMs that are passed through to TPPs, and (8) the fees collected from members (perhaps through employers or unions).¹⁶ TPP profits associated with providing prescription drug benefits are determined by these eight factors.

18. Of particular significance in evaluating Dr. Hartman's claim of class-wide impact from the alleged scheme is recognition that TPPs, PBMs and retail pharmacies vary in the degree and nature of their vertical integration into various levels of the drug distribution chain.¹⁷ As I explain below in Section IV, variation in vertical integration creates individual differences among TPPs in the availability of information regarding artificial increases in AWP and in the ability of each TPP to respond to such artificial increases in AWP.

16. Sometimes, there are also other fees paid to TPPs by PBMs. For example, [REDACTED] at one time had an arrangement under which it received a payment of \$1 per prescription from its PBM, [REDACTED]. See the Deposition of [REDACTED] pp. 141-2 and [REDACTED]. See also, the April 1, 2004 contract between [REDACTED] and [REDACTED], which includes an annual Third Party Income payment from [REDACTED].

17. For example, several TPPs own PBMs. See Deposition of [REDACTED]

B. Retail Pharmacy – PBM Relationship

19. PBMs negotiate prices for brand-name prescription drugs with retail pharmacies who became members of PBM retail pharmacy networks. Rather than separately negotiating a price for each drug, they start with the AWP, which is published for all drugs, and then negotiate prices as a percentage discount off AWP plus a small dispensing fee.¹⁸ AWP is published in a number of databases, such as First Data Bank's "Blue Book," MediSpan, and Red Book. PBM-Pharmacy contracts often specify which source of AWP to use, but with an allowance to substitute out of the specified database with a "nationally recognized" source.¹⁹

20. The discount off AWP is generally negotiated with a retail pharmacy on a contract-wide basis rather than drug-by-drug. The discount may vary across retail pharmacies, as the contracts are bilaterally negotiated between the PBM and each specific pharmacy or pharmacy chain. In some cases, the PBM explicitly maintains different pharmacy networks with

18. See, for example, [REDACTED] contract with [REDACTED] which specifies brand reimbursement rates ranging from AWP minus 16 percent to AWP minus 23 percent plus various dispensing fees (Exhibit [REDACTED]). Virtually all PBM-TPP contracts specify reimbursements based on the minimum of AWP and "usual and customary" price. For a substantial portion of drugs the "usual and customary" price was lower than AWP ([REDACTED] Exhibit 53, at [REDACTED]).

19. For example, [REDACTED] contracts with various pharmacies define AWP as, [REDACTED] (See, for example, [REDACTED]).

different contract terms including different discounts off AWP, and pharmacies can choose one or more networks to join.²⁰

21. As I describe in more detail in Section IV, contract negotiations between PBMs and retail pharmacies result in downward pressure on retail pharmacies' margins earned on distribution of brand-name drugs.²¹ Dr. Hartman apparently recognizes that the ability of PBMs to squeeze retailers' profit margins varies across PBMs and retail pharmacies.²² Most

20. See, [REDACTED] Deposition, p. 37 [REDACTED]

[REDACTED] and Deposition of James W. Buckley, Jr., New England Carpenters, October 20, 2006 and November 7, 2006 ("Buckley (NEC) Deposition"), p.262 ("Q. Do you recall that in May 2003, Segal was recommending that the fund change the network that it was using through AdvancePCS in order to save money? A. I do recall that sometime -- and I don't remember whether it was 2003 -- I do recall that -- Segal coming to the board and mentioning that PCS did have a different -- different type of network, and it would be advantageous to the fund to look into it. Q. And it would be advantageous in the sense that using that other network would save the fund money, right? A. Based on this document, the answer is yes.) See also, Declaration of Gregory Madsen, Caremark, December 18, 2006 ("Madsen (Caremark) Declaration").

21. For a detailed discussion of contract negotiations between PBMs and retail pharmacies and between PBMs and TPPs, see Declaration of [REDACTED], ¶¶ 117 – 138 [REDACTED]

22. See Deposition of Raymond S. Hartman, October 4, 2006, ("Hartman Deposition"), p. 245 ("I think one can't generalize on that. If -- if you have a large PBM and you have a small retail pharmacy, regional retail pharmacy, or -- the PBM will have a leverage. If you have a major mass -- if you're talking about Wal-Mart and if they're dealing with a PBM or if they're -- or someone of that sort, some kind of mass merchandiser, there's going to be differing levels of market power or power in the negotiation."). Dr. Hartman also reports in his September 2004 Declaration in the AWP MDL, Attachment C, fn. 31, that "[m]ost pharmacies report that PBMs have most of the negotiating power within these networks, especially given their growing market share and the dominance of a few large PBMs."

importantly, a PBM's ability to exert pressure on retail pharmacy margins does not necessarily depend on the PBM's explicit knowledge of each retail pharmacy's profit margin. Although such information may be useful (or even available to the PBM), it is not necessary in bargaining situations where the PBM pushes down the price (by pushing up the discount off AWP) until the retail pharmacy refuses to accept a further reduction in prices (or increase in the discount off AWP).

C. PBM-TPP Relationship

22. TPPs are employers, insurance companies, or other organizations that provide health benefits to their members, including insurance for prescription drugs. Many, but not all, TPPs outsource the management of their prescription drug benefit program to PBMs. In those cases, an explicit contract generally governs the terms of the PBM-TPP relationship. Other large and sophisticated TPPs, such as SelectHealth, Harvard Pilgrim, John Deere and Aetna, are to varying degrees vertically integrated and perform certain functions of PBMs such as negotiating directly with manufacturers and retail pharmacies.²³

23. PBMs provide a wide range of services to their client TPPs, especially in negotiating TPP reimbursement rates (*i.e.*, the net prices paid by TPPs and their members for drugs). As noted above, PBMs negotiate with pharmacies to determine the reimbursement to the pharmacy for drugs. In turn, they negotiate with TPPs to determine what the TPP must pay for those drugs. As with the pharmacy reimbursement, TPP payments are generally expressed as

23. For example, as discussed in fn 15, Harvard Pilgrim, [REDACTED], and Select Health maintain their own formularies and negotiate rebates directly with manufacturers, but they contract with PBMs for prescription services.

AWP less a percentage discount plus a dispensing fee.²⁴ Also similar to the PBM-pharmacy relationship, AWP is typically defined within the contract with some flexibility as to the source to be used.²⁵

24. PBM-TPP contracts contain a variety of price and non-price terms, including the discount off AWP, dispensing fee, administrative fee, and termination conditions. These contracts also sometimes contain “cost-shifting” terms in which the PBM and TPP negotiate a sharing of the risks from rising drug costs.

25. Often the PBM receives revenue from the differential in the discount off AWP specified in the PBM-pharmacy contract and the PBM-TPP contract. That is, the discount off AWP in the PBM-TPP contract (*i.e.*, what the TPPs pay) is often smaller than the discount off AWP in the PBM-pharmacy contract (*i.e.*, what the pharmacies receive). In those cases, the difference (itself a percentage of AWP) is net revenue for the PBM in addition to other fees such as dispensing fees and administrative fees. In other cases, the discounts may be the same, and the PBM’s compensation from TPPs is limited to dispensing fees and administrative fees. These cases arise when the PBM and TPP negotiate a “pass-through” contract in which the discount

24. See, for example, [REDACTED] April 1, 2004 contract with [REDACTED] which specifies brand reimbursement rates ranging from AWP minus 16 percent to AWP minus 23 percent plus various dispensing fees [REDACTED] and [REDACTED] May 1, 2001 contract with [REDACTED] specifies reimbursement rates for retail brand drugs that range from AWP minus 14 percent to AWP minus 19 percent plus dispensing fees [REDACTED]

25. For example, in the May 1, 2001 contract between [REDACTED] and [REDACTED] the definition of AWP is, [REDACTED]

and other terms negotiated by the PBM with retail pharmacies are applied directly to TPP's reimbursement rate.²⁶

26. The contract between a PBM and TPP may have terms limiting the amount of reimbursement paid by the TPP.²⁷ In addition, PBMs often pass through a portion of the rebates to TPPs. Some PBM-TPP contracts specify this rebate pass-through in terms of a dollar amount per prescription, while others specify a given percentage of the rebate to be passed through, ranging from zero to 100 percent.²⁸ TPPs in turn pass the rebate savings onto their customers,

26. Deposition testimony in the AWP MDL and this litigation illustrates the distinctions between "pass-through" contracts and contracts allowing PBMs to benefit from differences in reimbursement terms between the retail pharmacy-PBM level and the PBM-TPP level. See Deposition of

p. 150

Deposition of

pp 115-116

and

Deposition, p. 91

27. For example, the 1997 contract with includes a provision that freezes the AWP at its level at the beginning of each year, limiting increases in TPP reimbursement rates from AWP inflation.

28. For example, in the January 1, 1999 through December 31, 2001 contract between the and the language setting the pass-through on the formulary rebates was as follows:

D. Published AWP and WAC

and Cannon (Select Health) Deposition, p. 24 (“My primary concern is to obtain what I believe to be the lowest possible reimbursement that the market will bear.”).

transaction price.³³ Dr. Berndt explains the lack of a relationship between AWP and actual transaction prices with the following statement.

To knowledgeable industry observers, it has long been widely understood that in the US pharmaceutical industry the term "average wholesale price" (hereafter, "AWP") is a misnomer: it is not a measure of prices generally paid by wholesalers to manufacturers, it is not a measure of prices frequently paid by retail or mail order pharmacies to wholesalers, nor is it some average of these.³⁴

28. WAC for each drug is set by manufacturers. AWP is generally in a fixed proportion with WAC, where AWP historically was either 1.2 or 1.25 times WAC and now generally is 1.25 times WAC. AWP is published by a set of firms including FDB, Redbook and MediSpan. Historically these firms have obtained AWP from some combination of information from manufacturers and wholesalers.

29. Table 1 looks at a comparison set of brand-name prescription drugs not listed in Appendix A, but classified in the set of therapeutic classes in which the Appendix A drugs are found.³⁵ Two important conclusions can be drawn from the table. First, a substantial portion of this comparison set of non-Appendix A drugs (81.9 percent) already had an AWP/WAC ratio of

33. See, for example, Deposition of Carol Sidwell, John Deere Health, in the AWP MDL, September 17, 2004 ("Sidwell (John Deere) AWP MDL Deposition"), pp. 68-69 ("Q: So if you learned that AWP did not have a relation to any sort of real world prices, would that affect your negotiations with pharmacies in using AWP as a benchmark? A: I guess I already understand that AWP is not necessarily a direct linear relationship to the cost or the price that that pharmacy pays for the drug, so since I know that today, I'm not sure that it would change the way I'm doing business or the way I'm contracting with my pharmacies."). See also Deposition of [REDACTED] p. 99, for a discussion of his understanding that AWP is not a measure of what is actually paid [REDACTED]

34. Berndt Report, ¶14.

35. To make sure the drugs are comparable to Appendix A drugs, this comparison group is further limited to drugs with an AWP/WAC ratio between 1.0 and 1.5 in all periods.

1.25 prior to the beginning of the Class Period. As I explain below in Section V, this finding suggests that market responses to changes in the AWP/WAC ratio likely were ongoing prior to August 2001, the beginning of the Class Period and that changes in the AWP/WAC ratio for many Appendix A drugs likely would have occurred even in the absence of the alleged scheme. Second, McKesson's sales volume of Appendix A drugs is roughly equal to its sales volume of this comparison set of non-Appendix A drugs during the 2001-2004 period. This finding is important for the following reason: When an individual TPP obtains an increased discount off AWP in response to the artificial increase in AWP for Appendix A drugs, that increased discount applies to all self-administered branded prescription drugs sales (*i.e.*, both Appendix A drugs and non-Appendix A drugs). The TPP, therefore, will receive an effective reduction in its reimbursement rate for the non-Appendix A drugs that it purchases. Accordingly, the finding that Appendix A drugs and the comparison set of non-Appendix A drugs are roughly equal in volume suggests that this offset is substantial. As I will explain below in Section VI, this finding shows that a relatively modest increase in the discount off AWP (say, 2 or 3 percentage points) will completely eliminate any increase in reimbursement resulting from an artificial inflation in AWP of Appendix A drugs.

IV. DR. HARTMAN'S ANALYSIS DEPENDS CRITICALLY ON THE ASSUMPTION THAT THE ARTIFICIAL INFLATION IN AWP DOES NOT CAUSE ANY CHANGES IN OTHER PRICING FACTORS

A. The Key Underpinning of Dr. Hartman's Opinion is the Assumption that All Other Pricing Factors Remain Unaffected by the Alleged Scheme

30. I now turn to Dr. Hartman's analysis and show that it depends on the incorrect and misguided assumption that all market mechanisms are unaffected by the change in the AWP/WAC ratio (*i.e.*, a change in relative artificial prices). To begin with, Dr. Hartman claims that the allegedly inflated AWPs were published industry-wide because FDB was a

“monopoly.”³⁶ Dr. Hartman then concludes that “[t]he impact was uniform across Class members: *the AWP’s were increased.*”³⁷ He further concludes that the change in the AWP/WAC creates a permanent change in prices and profits. As I show below, this conclusion does not hold for any particular TPP because market mechanisms affecting that particular TPP’s actual reimbursement rate adjust to the change in the AWP/WAC ratio. It is for precisely this reason that it is not possible to show harm on a class-wide basis. The adjustments in other pricing factors are individual to each TPP.

31. In this Section of the report, I discuss Dr. Hartman’s overall assumption that market mechanisms do not adjust to the change in AWP/WAC ratio and the associated artificial inflation in AWP.³⁸ Dr. Hartman must make this assumption in order to claim that a change in

36. Dr. Hartman cites the FTC in his claim (at ¶14) that FDB was a monopolist for “comprehensive, electronic integrateable drug price information for the pharmaceutical industry.” Dr. Hartman then claims that FDB could use its monopoly position to raise the AWP/WAC spread. This claim, however, makes no economic sense for two reasons. First, if FDB had a monopoly position in a relevant product market for comprehensive, electronic integrateable drug price information, (assuming that such a relevant product market exists), then such a position would enable FDB to exercise market power vis-à-vis the price of that information. Such market power has nothing to do with FDB’s incentive to raise the published spread. Second, Dr. Hartman does not identify any change in FDB’s market position coincident with the beginning of the class period that suddenly enabled FDB to change the AWP/WAC ratio. That is, Dr. Hartman does not identify any market constraint on FDB that was relaxed in late 2001 and thereby enabled it to increase the AWP/WAC ratio.

37. Hartman Declaration, ¶14 (emphasis in original). Dr. Hartman fails to recognize that virtually all PBM-TPP contracts specify reimbursements based on the minimum of AWP and “usual and customary” price. For a substantial portion of drugs the “usual and customary” price was lower than AWP. (DC37 01067) Consequently, determination of impact requires an individual analysis of each TPP’s drug benefits to identify whether AWP was the price term applicable to the realized reimbursements.

38. In Section V, I discuss Dr. Hartman’s particular assumptions that contractual and non-contractual terms are unaffected by the alleged scheme for the whole Class Period.

relative artificial prices (WAC and AWP) somehow creates a permanent change in the actual levels of reimbursement rates.

i. Dr. Hartman Offers No Economic or Empirical Support For His Assumption

32. The basic tool of economics is the concept of equilibrium. In cases like this, where the main variable of interest is a transactions price, economists model the competitive interactions among the main market participants – here drug manufacturers, wholesalers, retail pharmacies, PBMs and TPPs – to arrive at actual prices as a function of a wide variety of factors (e.g., underlying market conditions including consumer demand, costs of production and distribution, and the bargaining power and information of each market participant).

33. While artificial prices in the form of WAC and AWP may provide a starting point, the actual prices (reimbursement rates) are determined via the discounts off AWP, rebates and rebate pass-through percentages, and various fees that are contained in contracts between PBMs and retail pharmacies and between PBMs and TPPs. The standard economic approach to understanding the determination of actual reimbursement rates would be to analyze changes in reimbursement rates as a function of changes in market conditions.

34. A primary reason for undertaking such analysis is for situations exactly like the extant one. A market variable changes (in this case AWP), and economists are called upon to predict the resulting change in transactions prices. Or, put differently, in order to determine the impact of the artificial change in AWP, economists are called on to compare realized prices to those from the situation that would have held *but for* the artificial change in AWP.³⁹

39. See, for example, Luis Cabral, *Introduction to Industrial Organization*, 2000, pp. 114-122, for a discussion of the use of comparative statics to evaluate the impact of a change in one exogenous variable on all other variables, such as actual prices and quantities,

35. Dr. Hartman fails to undertake this basic method. He assumes without any analysis, and contrary to logic, fact and economic methodology that actual prices follow an artificially constructed price measure (AWP) even though many of the elements that link the artificially constructed price measure and actual transaction prices are frequently changing. Because he fails to undertake such an analysis or modeling effort, he cannot reliably undertake the task of determining how the change in AWP or the change in the AWP/WAC ratio would alter actual transaction prices.

36. Instead, Dr. Hartman simply assumes that all contract terms other than AWP remain unaffected by the artificial inflation in AWP over the entire Class Period of over 3.5 years, without supporting why this would be the case after the change in AWP. This leads directly to Dr. Hartman's conclusions of common impact and large damages resulting from the change in AWP, a change in artificial prices. This is an unwarranted and totally biased assumption, particularly since most analyses of actual pricing consider cost, demand, and the nature of competition to be the fundamental variables that determine prices.⁴⁰ Artificially constructed price measures do not enter these models, and

(...continued)

accounting for the effect of the change in the exogenous variable on the forces that bear on all the other variables ("What is the use of solving models and deriving equilibria? Models are simplified descriptions of reality, a way of understanding a particular situation. Once we understand how a given market works, we can use the model to predict how the market will change as a function of changes in various exogenous conditions, for example the price of an input or of a substitute product. This exercise is known in economics as **comparative statics**: The meaning of the expression is that we compare two equilibria, with two sets of exogenous conditions and predict how a shift in one variable will influence the other variables." p. 114)

40. See, for example, Tim Bresnahan "Empirical Studies of Industries with Market Power," in *Handbook of Industrial Organization, Volume 2*, 1989, for a good summary of the variables that go in standard competitive pricing models.

thus actual prices are often taken to be independent of artificial prices. That is, even after the change in AWP/WAC ratio or an increase in AWP, the original actual prices could still be obtained through offsetting changes in other pricing terms such as discounts off AWP, fees or rebate pass-through percentages. Instead of considering changes in these other pricing terms, Dr. Hartman simply assumes that the actual levels of these other pricing terms remain fixed following a change in artificial prices, and consequently the realized reimbursement rates are assumed to change in a simple formulaic fashion.

37. To show the flaw in Dr. Hartman's logic, consider the example of two homes for sale on the same street where both homes are identical in all respects. Now further assume that one seller sets the list price at \$300,000, while the other decides to set the list price at \$350,000. The fact that one seller sets the list price at \$350,000 does not make that house worth \$50,000 more than the identical home, nor does it make that house sell for \$50,000 more. Economic theory shows that two identical homes will sell for roughly the same price, regardless of what is the seller's list price. The point here, which is ignored in Dr. Hartman's report, is that transaction prices are set by market conditions, not by the some artificial measure of price.

38. Application of economic analysis to the circumstances of this case establishes that there would be market adjustments to a change in an artificial price measure such as AWP that would drive reimbursement rates back to their levels that prevailed prior to the artificial change. The reason for this is that the artificial inflation in AWP did not change fundamental factors affecting the determination of actual market prices: the level of competition did not change because of the change in AWP; the cost of production did not change; and determinants of demand did not change. All that changes is the artificial price used in specifying contracts, AWP. Once AWP increases, other

mechanisms are triggered to restore reimbursement rates to their previous levels – determined by factors such as competition, costs and demand. The responsiveness of these market mechanisms differs across TPPs depending on individual differences in the availability of information, the degree of vertical integration and negotiating power with respect to other market participants such as PBMs, manufacturers and retail pharmacies. Dr. Hartman's conclusions simply rely on unwarranted assumptions, for which Hartman presents no underlying model or economic analysis to support such positions. These assumptions are contradicted by the factual record, and cannot be validated, or even tested, on a class-side basis.

39. One indication of Dr. Hartman's thinking in support of his assumption of no market adjustment is his recent discussion of the estimated cost savings from the proposed FDB settlement that would return the AWP/WAC ratio to 1.2 for all drugs with an AWP/WAC ratio of 1.25 whether or not they are listed as Appendix A drugs. Dr. Hartman explains his assumption that the market would not adjust to the proposed FDB settlement for at least one year as follows:

Inherent in this analysis is the assumption that the reimbursement formulae negotiated market-wide (including those for retail pharmacies, private TPPs and other market participants) will not adjust in the short-run (over 2007) to defeat the impact of the *FDB Settlement Agreement* and FDB's reduction of the WAC to AWP markup. This assumption is reasonable for the following reasons, some of which have been introduced in footnote 14 above. First, the relationships governing reimbursement practices and procedures, market-wide, are complex and slow to change and will be subject to very public scrutiny after this settlement. Second, established reimbursement contracts and statutes have fixed durations. Third, the costs associated with implementing changes to the overall reimbursement structure and individual reimbursement algorithms used by market participants are substantial. Fourth, strategies developed by individual market participants to reverse the effects of the settlement will be developed individually and over time, as different market participants assess their strategic alternatives, observe the strategies of other market participants and ultimately implement their consequential strategies. As a result, it is fair to assume that inertia in the retail market and among market

participants will allow for the substantial cost savings calculated in this Declaration. It is highly unlikely that the interested market participants will be able to reverse and defeat the effects of the settlement within one year, with possible exceptions discussed in Footnote 14. Since I am only estimating the benefits of a settlement, the effects of which may have impacts lasting for many years, *for a single year under conservative assumptions*, I believe my calculations of savings to be conservative.⁴¹

40. I interpret Dr. Hartman's comments as follows. He believes that there is inertia that would prevent market participants from adjusting to a change in the AWP/WAC ratio, but that this inertia depends on individual market participants' responses as they "assess their strategic alternatives, observe the strategies of other market participants and ultimately implement their consequential strategies." In other words, market response depends on individual issues. There is no economically meaningful reason why the character of the dynamics of the responses to the settlement would differ significantly from responses to the AWP/WAC ratio change. If the responses to the settlement are, in Dr. Hartman's words, "developed by individual market participants," he is simply acknowledging the point of this subsection: responses to the AWP/WAC ratio change will be determined individually by TPPs and thus, any reliable analysis of impact must be done on an individuated basis. Interestingly, Dr. Hartman believes that the response to the drop in the AWP/WAC ratio from 1.25 to 1.20 from the proposed settlement may take only a year while he assumes that a response to the increase in the AWP/WAC ratio from 1.20 to 1.25 from the alleged scheme did not happen at all for at least a period over more than 3.5 years (August 1, 2001 to March 15, 2005). Dr. Hartman's statements in support of the settlement seem at odds with his statements in support of class certification.

41. Declaration of Raymond S. Hartman: Impact and Cost Savings of *The First DataBank Settlement Agreement*, October 4, 2006, fn 19 (emphasis in original).

ii. Dr. Hartman's Theory of Impact Depends on a Further Assumption of No Competition Among PBMs

41. Dr. Hartman's theory of class-wide impact rests on the assumption of no market response to the change in AWP/WAC ratio and the artificial inflation in AWP. That assumption in turn rests on the implicit assumption of a lack of competition among PBMs. Plaintiffs allege that the increase in the AWP/WAC ratio led to an increase in retail pharmacies' profit. Some or all of this excess profit, however, will be lost by retailers to PBMs to the extent that PBMs have the ability to reduce their negotiated reimbursement rates by increasing the discounts in PBM-pharmacy contracts.⁴² Plaintiffs' and Dr. Hartman's theory of class-wide injury therefore requires that none of this excess profit in the hands of the PBMs flows back to TPPs, or directly goes to TPPs using "pass-through" contracts. Consequently, competition among PBMs for any particular TPP's business undermines or invalidates this theory.

42. In the context of the AWP MDL, the Berndt Report notes that competition among PBMs causes a sharing by PBMs with TPPs of excess profit from artificially inflated AWPs. In particular, he states, "In the context of self-administered drugs, therefore, Plaintiffs' arguments and conclusions appear to be at variance with those of the FTC, and my own analysis discussed earlier in this report. If competition among PBMs is vigorous, even if the self-administered AWPIDs were artificially inflated, injury and damages to third party payors do not follow, particularly on a class-wide basis. Since lack of competition among PBMs is crucial to plaintiff's theory, this would appear to undermine their allegations, and certainly their

42. See Madsen (Caremark) Declaration, ¶3, ("In approximately the last quarter of 2002, I learned from someone in Caremark's finance department that the spreads on a large number of brand name drugs increased from 20% to 25%. These increased spreads were one of the factors I considered in negotiating Caremark's contracts with pharmacies.")

assumption of class-wide injury and damages.”⁴³ In his deposition, Dr. Hartman appears to disagree with the conclusion of the FTC and Dr. Berndt regarding competition among PBMs.⁴⁴

43. My analysis of the role of PBMs in the self-administered branded prescription drug distribution business shows that PBMs facilitate the operation of market mechanisms that cause TPP reimbursement rates to return to or retain their levels that prevailed prior to the artificial change following the change in the AWP/WAC ratio and artificial inflation in AWP.

44. The first link in the chain is the relationship between retail pharmacies and PBMs. Retail pharmacies compete to be affiliated with PBMs because PBMs can provide groups of customers to pharmacies joining PBM networks. Thus, to varying degrees, any increase in margin for retail pharmacies will be passed on to PBMs in the form of increases in the discounts off AWP in PBM/pharmacy contracts. This effect may be greatest among the pharmacies that lack negotiating power vis-à-vis the PBMs.⁴⁵ That is, the pharmacies least likely to retain any increase in profit resulting from the increase in the AWP/WAC ratio are pharmacies that lack negotiating power relative to large PBMs because of either size or location.⁴⁶

43. Berndt Report, ¶206.

44. Hartman Deposition, pp. 195-199. Dr. Hartman also testified in substance that he is not able to say that Dr. Berndt is wrong. See Hartman Deposition, pp. 197, 199.

45. Dr. Hartman claims that McKesson was motivated to increase the AWP/WAC ratio by benefits to retail pharmacies. The logic of this claim diminishes if PBMs squeeze the excess margins from the change in the AWP/WAC ratio out of retail pharmacies by increasing the discount off AWP in the PBM-pharmacy contracts. Indeed, McKesson's primary customers, independent retail pharmacies, are the pharmacies least likely to retain any increased margin.

46. See Sidwell (John Deere) AWP MDL Deposition, pp. 52-53, for discussion of how Walgreens, a large retail pharmacy chain, grants larger discount to John Deere than does P&S pharmacy (a smaller independent pharmacy) because of the larger patient volume John Deere has in Walgreens' geographic area, which works to John Deere's advantage in its negotiations with Walgreens.

45. PBMs compete with each other for the business of TPPs.⁴⁷ The level of competition will vary depending on the circumstances of each TPP and each PBM. For example, larger TPPs with a substantial number of consumers will have more options and greater leverage in choosing among PBMs.⁴⁸ Smaller TPPs may have less choice and be less able to extract concessions from their PBM.⁴⁹ Because each TPP negotiates its price and other terms separately with each PBM, the ability of “marginal” TPPs (those with an ability to switch among PBMs) does not necessarily discipline the pricing offered to all TPPs. This means that the extent that excess profits are shared with TPPs will vary among TPPs, which shows again the need for individuated analyses.

47. For discussions of PBM competition, see, for example, [REDACTED] Deposition of [REDACTED] in the AWP MDL, pp. 60-61; and [REDACTED] Deposition, p. 44 (Q: [REDACTED] A: [REDACTED] In addition, [REDACTED] Teachers (SEGAL/NEC 09124-32), and [REDACTED] all ran RFPs during the class period. [REDACTED], who helped to conduct the RFPs, prepared written analyses of the responses that highlight the highly competitive nature of the process. See, for example, [REDACTED] Exhibit 59 and [REDACTED] Exhibit 13.

48. See [REDACTED]

49. It is important to note here that some relatively small TPPs, like New England Carpenters, may be able to purchase prescription benefits through larger union umbrella organizations that are better able to offer substantial volume discounts based on the total membership to the participating unions. For example, see generally, Buckley (NEC) Deposition, pp. 124-6.

46. There are two principal mechanisms for PBMs to pass on excess profit to TPPs. First, PBMs periodically increase discounts off AWP in their contracts with each TPP.⁵⁰ An increase in AWP can then be offset by an increase in the discount off AWP. Second, PBM-TPP contracts typically specify the percentage of PBM rebates (earned from manufacturers) that are passed through to the TPP. These percentages can range from zero to 100 percent. If a PBM is compelled to pass on some or all of its additional profit (squeezed from retail pharmacies) through competition, it can accomplish this by increasing the portion of the rebates passed through to TPPs. This increased percentage then reduces the net realized reimbursement paid by the TPP over and above an increase in the dollar amount of the rebate resulting directly from the increase in AWP.⁵¹

47. To see this, consider the following example. Suppose initially the AWP for a particular package of prescription drugs is \$8,000 per year. An increase in the AWP/WAC ratio from 1.20 to 1.25 would result in a new AWP of approximately \$8,333, assuming no change in WAC. If the rebate paid to the PBM is set at 5 percent of AWP, then the rebate would increase from \$400 to approximately \$417. Suppose initially the rebate pass-through to the TPP is zero percent. Then the amount of rebate passed through to the TPP initially would be zero. Now

50. See [REDACTED], pp. 45-46 for discussion of increasing discounts off AWP over time as a result of competition among PBMs for business of TPPs. In addition to increases in the discounts and rebate pass-through, PBMs also adjust dispensing fees and administrative fees to pass savings to TPPs. The [REDACTED] RFP analyses for [REDACTED] provide a useful model for seeing how variations in these fees affect bottom line pricing. [REDACTED] In addition, as noted, [REDACTED] agreed to reduce fees mid-contract when [REDACTED] asked for help controlling the cost of its prescription drug benefit. [REDACTED]

51. The Hartman Declaration, ¶25, discusses increases in the dollar volume of rebates resulting from the increase in AWP. The increase in pass-through percentage effectively increases the rebate received by the TPP as a percentage of AWP.

suppose the percentage of the rebates passed through from the PBM increased to 50 percent as a result of renegotiation between the PBM and the TPP in light of the artificial inflation in AWP.⁵² Then the amount of rebate passed through to the TPP would be \$208.50, an amount that could completely offset any impact of the artificial increase in AWP, depending on the levels of the discount off AWP before and after the artificial increase in AWP ratio.⁵³

iii. Empirical Evidence Undermines or Invalidates Dr. Hartman's Assumption

48. The evidence that I have examined does not support Dr. Hartman's assumption that discounts off AWP were unaffected by the alleged scheme. Several of the new contracts negotiated by the named plaintiffs during the Class Period promised higher discounts off AWP.⁵⁴ The following are particular examples of changes over time in discounts off AWP in PBM-TPP contracts. These examples show that discounts increased over time. To be sure, I have not seen evidence indicating that all of these market adjustments in every contract were necessarily caused by the changes in the AWP/WAC ratios for the Appendix A drugs. Indeed, some of the

52. See, for example, the [REDACTED] contracts (cited later in ¶85) where the rebate pass-through percentage increased from zero to 50 percent.

53. For example, suppose the initial discount off AWP was 14 percent and increased to 15 percent as a result of the artificial inflation in AWP. Then the apparent increase in reimbursement from the artificial inflation would be \$203.50 ($\$203.50 = 0.85 \times \$8333 - 0.86 \times \$8,000$). The increase in rebate received by the TPP of \$208.50 therefore would more than offset the increase in reimbursement of \$203.50.

54. In addition, [REDACTED] testified that AWP discounts have been going up over time, [REDACTED] Deposition, pp. 45-6 [REDACTED]

increased discounts occurred before the beginning of the Class Period in August 2001.⁵⁵

Nonetheless, there are examples that as AWP increases over time, there are individualized market adjustments though increased discounts off AWP.⁵⁶ Therefore, if the alleged scheme caused an artificial increase in AWP over and above the underlying inflation in AWP, then it is likely that some TPPs' discounts increased at a faster rate than they otherwise would have but for the alleged scheme.

- [REDACTED] entered into a three-year contract with [REDACTED] in September of 2001 with discounts of a minimum of thirteen percent off of AWP for branded retail drugs with an effective annual average discount of sixteen percent and eighteen percent off of AWP for branded mail order drugs.⁵⁷ In April 2002, [REDACTED] and assumed control of the contract with [REDACTED]. In late 2002, only one year into the three-year contract, [REDACTED] and [REDACTED] entered into discussions regarding the terms of the [REDACTED] contract. Specifically, [REDACTED] wanted, and [REDACTED] offered, greater discounts and lower dispensing and administrative fees.⁵⁸ The mail order discounts and reduced fees are memorialized in an

55. However, as I noted above in ¶29, the change in the AWP/WAC ratio to 1.25 for the non-Appendix A drugs began before the Class Period and therefore may have triggered responses in market mechanisms prior to the beginning of the Class Period.

56. See, for example, Madsen (Caremark) Declaration, ¶3 ("These increased spreads were one of the factors I considered in negotiating Caremark's contracts with pharmacies.")

57. [REDACTED] Exhibit 3 [REDACTED]

58. See, for example, [REDACTED] Deposition"), pp. 192-3 [REDACTED]

exchange of correspondence in the spring of 2003.⁵⁹ [REDACTED] and [REDACTED] never reached agreement on the enhanced retail discount. According to the deposition testimony, [REDACTED] offered discounts of 20% - 21%, but [REDACTED] wanted more.⁶⁰

- [REDACTED]: Signed a 3-year contract with an effective date of January 1, 2001 with a retail brand reimbursement of AWP minus fourteen percent plus a dispensing fee of two dollars.⁶¹ This contract was amended in August 1, 2001 and January 1, 2002 with no change in this reimbursement term.⁶² However, the contract was amended as of July 1, 2003 with a new retail reimbursement of AWP minus sixteen percent plus a dispensing fee of \$1.50.⁶³
- [REDACTED]: The initial contract between [REDACTED] and [REDACTED] was signed in November of 1990. There were amendments to this contract made on December 1, 1998 and on February 1, 2001. In the December 1, 1998 amendment, the Network Rate was defined as being AWP minus 13 percent or AWP minus 10 percent depending on the network that adjudicated the claim. If the actual pharmacy rate was less than the Network rate defined in the contract, [REDACTED] agreed to share the gains, paying [REDACTED] 0.50 percent of AWP for each claim adjudicated for less than the Network Rate before October 1, 1999, falling to 0.25 percent of AWP after October 1, 1999.⁶⁴ In the February 1, 2001 contract amendment, the guaranteed Retail Network Discount for branded

59. See [REDACTED] Exhibits 9 and 10.

60. See [REDACTED] Deposition, pp. 197-8 [REDACTED]

61. [REDACTED]

62. [REDACTED]

63. [REDACTED]

64. [REDACTED]

products increased to AWP minus 14% plus a dispensing fee of \$1.85 or \$1.75, depending on whether the case was Performance Rx.⁶⁵

- [REDACTED] The contract, effective January 1, 1999, between [REDACTED] and [REDACTED] set retail brand reimbursement at AWP minus 12.5 percent plus a dispensing fee of \$2.50 for 1999; AWP minus 13 percent plus a dispensing fee of \$2.50 for 2000; and AWP minus 13.5 percent for 2001.⁶⁶ [REDACTED] and [REDACTED] signed a new agreement in January 1, 2002 further increasing the retail brand discounts and lowered the dispensing fee. This contract set retail brand reimbursement rates at AWP minus 14 percent plus a dispensing fee of \$2.00 in 2002; AWP minus 14.5 percent plus a dispensing fee of \$2.00 in 2003; and AWP minus 15 percent plus a dispensing fee of \$2.00 in 2004.⁶⁷
- [REDACTED] The contract, effective September 1, 1999, between [REDACTED] and [REDACTED] set retail brand reimbursement rates at AWP minus 14.5 percent plus a dispensing fee of \$2.50.⁶⁸ Effective January 1, 2002, [REDACTED] and [REDACTED] negotiated a new contract that with a higher discount and a lower dispensing fee.⁶⁹ The new reimbursement rate for retail brand drugs was AWP minus 15 percent plus a dispensing fee of \$1.80 to \$1.90 depending on the number of lives in the program.

49. In addition to reviewing contracts, I analyzed reimbursement data published in the Prescription Drug Benefit Cost and Plan Design Survey Report.⁷⁰ Table 2 shows that during the period 1995-2004, annual average discounts off AWP negotiated by TPPs increased over time while dispensing fees decreased. These results are consistent with the observation that discounts specified in contracts increased and dispensing fees decreased as AWP increased. Again, while all these market adjustments for every contract were not necessarily caused by the changes in the

65. [REDACTED]

66. [REDACTED]

67. [REDACTED]

68. [REDACTED]

69. [REDACTED]

70. Prescription Drug Benefit Cost and Plan Design Survey Report, PBMI, 2005, p. 4. PBMI calculates an "average reimbursement rate" based on the discount off AWP and the dispensing fee. According PBMI's calculation, "average reimbursement rates" declined during the 1995-2004 period as AWP increased.

AWP/WAC ratios for the Appendix A drugs, I have been exposed to evidence showing that discounts increase and dispensing fees decrease with inflation in AWP. To the extent that there is additional artificial inflation in AWP resulting from the alleged scheme, the discounts for some TPPs may well have increased at a faster rate than they would have absent the artificial increase in AWP. Similarly, dispensing fees may have decreased at a faster rate than they would have absent the artificial increase in AWP.

50. [REDACTED], a long-time drug industry consultant, appears to believe that observed increases in discounts off AWP were caused by the increase in the AWP/WAC ratio. [REDACTED] recognized that discounts off AWP have increased over time and attributes this increase to change in the AWP/WAC ratio. In particular, [REDACTED] testified in [REDACTED] deposition as follows.

Q:

A:

Q:

A:

71

Apparently, [REDACTED] would disagree with Dr. Hartman's critical assumption that the alleged scheme did not cause any changes in the negotiated discounts off AWP. Thus, Dr. Hartman's assumption cannot be sustained as valid, and testing it by evaluating the impact of changing discounts requires individualized analyses.

71. Deposition of [REDACTED], p. 221. I understand that plaintiffs withdrew [REDACTED]

B. Whether or Not TPPs Were Aware of the Alleged Scheme or the Artificial Inflation in AWP, It Is Incorrect to Assume Class-Wide Impact

51. Although there are numerous ways in which the market can adjust to an artificial increase in the AWP/WAC ratio, the return to actual prices and profits that prevailed prior to the artificial change may be quicker for certain TPPs than for others, and some TPPs may return to aggregate price levels that were *lower* or *higher* than prevailed prior to the inflation in AWP.

Distinction among TPPs in two general areas will determine the speed with which its reimbursement rates likely adjust to the change in the AWP/WAC ratio: (1) differences in each TPP's knowledge of changes in AWP or the AWP/WAC ratio and (2) differences in each TPP's negotiating power relative to PBMs and retail pharmacies.⁷² Dr. Hartman fails to account for these important differences among TPPs and they are yet additional reasons why an individuated analyses are necessary.

52. An individual TPP's knowledge or access to information regarding changes in AWP or changes in the AWP/WAC ratio will affect the speed of its adjustment of discounts, dispensing fees, rebate pass-through percentages or co-pays to compensate for a possible unexpected increase in AWP. This knowledge depends in part on the type of information conveyed to the TPP from its PBM. The knowledge also depends on the level of sophistication of the TPP.⁷³ Most importantly, for purposes of class certification, evaluating each plaintiff's

72. For example, [REDACTED] of [REDACTED] testified in his deposition for the AWP MDL that larger TPPs get better deals because they are more informed purchasers and they have size and clout in the marketplace. See Deposition of [REDACTED] AWP MDL Deposition"), p. 68 [REDACTED]

73. For example, Carol Sidwell of John Deere Health testified in her deposition for the AWP MDL that her company (a TPP) monitors many aspects of drug costs on a daily basis. See Sidwell (John Deere) AWP MDL Deposition, p. 53 ("We monitor claims processed on a daily basis. We have weekly, monthly, quarterly reporting that looks at our claim volume, our cost per claim, brand generic utilization, formulary. We have various

degree of knowledge and access to information requires an individualized analysis. I am not aware of a simple formulaic way of determining each plaintiff's degree of knowledge.

53. The second area of distinction among TPPs that will affect the speed of the adjustment to a change in the AWP/WAC ratio is differences in negotiating power relative to PBMs and retail pharmacies. For example, a large and sophisticated TPP facing competition among PBMs for its business likely has a greater ability to offset, either partially or completely, an increase in AWP with an increased discount as compared with a small TPP dependent on a single PBM. These distinctions in negotiating power among TPPs can be identified only with an individualized analysis of the TPP's options.

i. Explicit Knowledge of the Change in the AWP/WAC Ratio is Not Necessary to Achieve a Market Adjustment

54. Dr. Hartman's position that the increase in the AWP/WAC ratio caused a sustained increase in reimbursement rates through at least March 2005 relies on the belief that TPPs would not act to adjust to the change in the AWP/WAC ratio unless they had explicit

(...continued)

employer group reporting, various segments of our population looking at trends. It would be easier to say what we don't do to monitor it."). Similarly, see [REDACTED] Deposition, p. 24 [REDACTED]

[REDACTED]

knowledge of the alleged scheme. For example, Dr. Hartman's comments in his declaration regarding the proposed FDB settlement imply that knowledge of changes in the AWP/WAC ratio leads to renegotiation of discounts off AWP:

In light of the announced settlement and the size of saving implied to payers...it is also possible that retailers would attempt to renegotiate the percentage discount off FDB's AWP, to defeat the reduction in the allowed amount to be reimbursed. While possible, *given the public nature* of both the FTC 2001 divestiture of MediSpan from FDB and of this settlement, and given the very recent increased attentiveness of CMS with passage of the Medicare Prescription Drug Improvement and Modernization Act, it is unlikely that such strategic shifts to MediSpan and such attempts to renegotiate reimbursement formulae *would go unnoticed and unchallenged* by TPPs and by Medicaid, certainly over the next calendar year.⁷⁴

The implication of Dr. Hartman's comments on the proposed FDB settlement is that had TPPs and PBMs been aware of the change in the AWP/WAC ratio, they would have acted to adjust to the change with increased discounts.

55. Along the same lines, Dr. Hartman stated in his September 2004 declaration in the AWP MDL that payors who were aware of the alleged scheme in that case to increase artificially the spread between AWP and average selling price ("ASP") were not harmed. In particular, Dr. Hartman testified as follows.

The spread must be increased secretly, because if such spreads were understood to exist, competitors would behave to eliminate them. For example, if TPPs thought that they were reimbursing for branded drugs at an AWP-x% + a dispensing fee and receiving an appropriate share manufacturer rebates, they would continue with that relationship. If however, the TPPs discovered that the AWP that formed the basis of their reimbursement payments were artificially inflated and that the

74. Declaration of Raymond S. Hartman: Impact and Cost Savings of the First DataBank Settlement Agreement, September 27, 2006, fn.14 (emphasis in original).

TPPs had not received a fair share of their rebates, they would substitute away from that PBM and perhaps that drug product.⁷⁵

56. Dr. Hartman took a similar position in this case when he testified as follows regarding the extent that the alleged scheme was known to market participants:

Well, it makes a lot of difference. If there were a public announcement as of August '01 that from now on, every drug that was listed with a markup of 20 percent through the next three or four years, we're going to change to a markup of 25 percent, that's going to have a different effect on – and that's publicly known and it's known by everybody, that's going to be different than if I'm a TPP and I happen to observe in February '02 that some drugs change and then April of '02, I notice some other drugs change. Are you saying that they – it becomes known each month that the change occurs, that this was going to be a change in strategy on the part of First DataBank? What is your definition of "being known"? What do you mean by "being known"?⁷⁶

Dr. Hartman appears to believe that the nature of TPPs' knowledge of the change in the AWP/WAC ratio affects the impact of the alleged scheme. Dr. Hartman's conclusion of class-wide impact in this case, therefore, relies on an assumption that each and every TPP and PBM

75. Declaration of Raymond Hartman, September 3, 2004, Attachment C, page 15. As Dr. Hartman elaborated in the deposition (at p. 83), if TPPs had known of the increased AWP/WAC ratio, many would have said, "I'm not going to pay you AWP less 15. I'm going to negotiate more aggressively" and "there's going to be a heat-seeking missile that going to compete that away."

76. Hartman Deposition, p. 91.

had no knowledge of the change in the AWP/WAC ratio.⁷⁷ (As shown below, many TPPs had knowledge of the changes in AWP.)

57. Economics teaches that although a firm such as a TPP may be interested in knowing its suppliers' costs or profit margin when negotiating a contract, such knowledge is not necessary for each firm to achieve its actual price through negotiation. Instead, market adjustment to the change in the AWP/WAC ratio may result from TPPs' knowledge of AWP itself or from TPPs' realization that their own profit margins have fallen. So long as TPPs and PBMs can observe increases in AWP or their own profit margins, they are likely to act to compensate for increases in AWP by seeking lower reimbursements.⁷⁸

77. In his deposition, Dr. Hartman had a variety of things to say about TPP knowledge. See, for example, Hartman Deposition, p. 64 ("Q: Is it correct it doesn't make a difference to you whether third-party payors knew or didn't know about the 5 percent change?...A: What I'm saying is that what -- the knowledge that they had over this period of time was insufficient to -- to lead to any change in what -- what I've -- my conclusions in this report."). Hartman Deposition, pp. 68-69 ("Q: So would it be correct you make no assumption as to whether some, all, or most third-party payors were aware of the 5 percent change for purposes of any opinion you're giving here?...A: I'm assuming that the third-party payors are aware of these types of issues in the ways that I've seen in dep -- in enumerable depositions; that there is a general lack of awareness of these kinds of issues on the part of third-party payors. And so the -- I'm taking -- I'm assuming that the third-party payors behave and know as they -- as they have behaved and known historically, and that's what I assume...I—I assume that many third-party payors were unaware of the third -- of the change based on what I've seen of awareness of third-party payors, period."). In the end, however, Dr. Hartman explains that he was asked to assume that TPPs had no knowledge of the increase in the AWP/WAC ratio. See Hartman Deposition, p. 351 ("I have been asked to assume here, for purposes of what I'm doing, that they didn't know, and they didn't respond, and they were locked in for reasons that are facially accurate to me.")

78. See [REDACTED] Deposition, p 38, [REDACTED] Deposition, p. 53 and Cannon (Select Health) Deposition, p. 24 cited above in fn 32.

ii. Individual Analysis is Required to Determine the Speed of the Response to the Artificial Inflation in AWP

58. Testimony of PBM representatives indicates that negotiations with retail pharmacies do not require explicit knowledge of each pharmacy's particular costs. Instead, PBMs attempt to push prices paid to pharmacies down to a point where the pharmacies cannot earn an excess profit.⁷⁹ This process operates in an environment where AWP increases periodically. Therefore, any artificial increase in AWP (without a change in cost) will tend to be captured to a significant degree by PBMs.⁸⁰ Such a tendency does not depend on explicit knowledge of the AWP/WAC ratio on the part of PBMs. Furthermore, this result holds regardless of whether the artificial increase in AWP results from a purported manufacturers' conspiracy (in the AWP MDL) or from the alleged scheme in this case.

59. As I now explain, the apparent benefit achieved by PBMs from artificial inflation in AWP automatically flows to some TPPs and therefore requires an individualized analysis to determine the impact, if any, on each TPP. Some TPPs negotiate a "pass-through" contract with their PBM, in which the PBM's average margin earned on sales through its network of retail pharmacies is passed through to the TPP. In practice, this means that contract terms such as the discount off AWP charged to the TPP is the average of the discounts off AWP contained in the PBM's various contracts with retail pharmacies.⁸¹ Similarly, the dispensing fee contained in the

79. See [REDACTED], pp. 147-150 for a discussion of how Caremark negotiates with retail pharmacies without detailed knowledge of prices paid by retail pharmacies for drugs. Instead, [REDACTED] objective is to negotiate the lowest price possible under the assumption that the retail pharmacy will not agree to prices below their own costs.

80. Plaintiffs apparently concede that PBMs will capture the benefit from the change in the AWP/WAC ratio. See Complaint, ¶2. ("As the difference between AWP and WAC increases, the larger 'spread' affords retailers and other middlemen like pharmaceutical benefits managers ('PBMs') opportunities for larger profits.")

81. See [REDACTED] Deposition, pp. 115-16 and [REDACTED] Deposition, p. 91 cited above in fn 26.

PBM-TPP contract will be the average of the dispensing fees negotiated in the PBM's contracts with retail pharmacies.⁸²

60. In contrast to "traditional" PBM-TPP contracts, "pass-through" contracts in principle do not allow the PBM to profit on differences in terms between the PBM-retail pharmacy contracts and PBM-TPP contracts. More importantly, for purposes of evaluating class certification the existence of "pass-through" contracts means that any additional profit earned by retail pharmacies as a result of the alleged scheme that pass through to PBMs may automatically flow back to TPPs. For example, suppose as a consequence of the artificial inflation in AWP that a PBM extracts additional profit from retail pharmacies through increased discounts off AWP in its contracts with retail pharmacies. The PBM's TPP clients using "pass-through" contracts would also obtain a reimbursement rate with an increased discount off AWP. This occurs as an automatic mechanism when there is a "pass-through" contract between the TPP and the PBM.⁸³

61. For many TPPs using "pass-through" contracts, changes in pricing terms in response to the artificial inflation in AWP may not require any knowledge by the TPP of the alleged scheme, the change in the AWP/WAC ratio or even inflation in AWP. So long as the PBM obtains concessions from retail pharmacies in response to the increase in AWP, then TPPs

82. For purposes of my analysis, "pass-through" contracts are equivalent to direct contracts between TPPs and retail pharmacies because any change in discount off AWP or other contract concession obtained from the retail pharmacy in response to the artificial inflation in AWP automatically flows through to the TPP. For a discussion of TPPs that negotiate contracts directly with retail pharmacies see ¶¶13, 22.

83. See [REDACTED] Deposition, p. 98, for discussion of why PBM competition creates an incentive for PBMs with "pass-through" contracts to negotiate favorable terms with retail pharmacies [REDACTED]

using “pass-through” contracts automatically obtain the benefits negotiated by the PBM. These TPPs obtain these benefits without any knowledge of the alleged scheme. Moreover, competition among PBMs and the existence of “pass-through” contracts implies that the protections afforded by “pass-through” contracts likely apply to other TPPs operating in the traditional contracting framework as well.

62. In summary, an individual TPP’s knowledge of the change in the AWP/WAC ratio or of artificial inflation in AWP is *sufficient* to undo Dr. Hartman’s view of impact from the alleged scheme, but it is not *necessary*. Individual TPPs may have been protected from some or all of the impact of the alleged scheme even with minimal or no knowledge of the change in the AWP/WAC ratio or of artificial inflation in AWP.

C. There is Evidence That Some TPPs Were Aware of the Artificial Inflation in AWP

63. Dr. Hartman’s claim of class-wide impact requires a strict assumption that the alleged scheme and the change in AWP/WAC ratio were unknown to all TPPs for the whole Class Period, over 3.5 years (August 2001 – March 2005).⁸⁴ The existence of sophisticated PBMs serving TPPs and in some cases vertically integrated with TPPs at the least raises doubts about the validity of Dr. Hartman’s assumption. Indeed, evaluation of the impact of the alleged scheme requires individual analyses of which TPPs had direct knowledge of the change in AWP/WAC ratio or were served by a PBM with such knowledge.

84. Plaintiffs claim that they will be able to show “[e]vidence from Class members indicating a lack of knowledge of the markup.” *New England Carpenters Health Benefits Fund, et al v. First DataBank, Inc. and McKesson Corporation*, United States District Court, District of Massachusetts, C.A. No. 1:05-CV-11148-PBS, Plaintiffs’ Proposed Trial Plan for Trial of Class Claims Against McKesson Asserted in the Second Amended Complaint, December 20, 2006, p. 6. For such evidence to be relevant to the question of class-wide impact, plaintiffs must show that all class members lacked knowledge of the markup for the whole Class Period.

64. Notwithstanding that it is unnecessary for TPPs to have had explicit knowledge of the alleged scheme or even knowledge of the artificial inflation in AWP to obtain protection from any harm flowing from the artificial inflation in AWP, there is ample evidence that a number of TPPs were aware of the change in the AWP/WAC ratio or the artificial inflation in AWP. There are a wide range of participants in the pharmaceutical industry that monitor very closely drug prices and overall trends in drug spending. PBMs, vertically integrated TPP / PBM organizations, drug manufacturers, and wholesalers monitor drug prices on a daily, weekly or monthly basis. Because of this, it is difficult to imagine how the change in the AWP/WAC ratio or an unusual increase in AWP could have gone unnoticed *for the entire class period by all market participants*.⁸⁵

65. To understand how these market players were likely able to uncover the change in the AWP/WAC ratio quickly, I analyzed drug prices for some of the largest NDCs over time. In Table 3, I list the annual AWP increases for four high-dollar volume NDCs, Lipitor 10MG, Plavix 75MG, Prevacid 30MG, Wellbutrin SR 150MG from January 1999 through December 2005. All of these drugs had increases in their AWP/WAC ratios from 1.20 to 1.25 in January 2002, coincident with an increase in WAC. I list for these four NDCs the annual price increases for the four periods leading up to the AWP/WAC ratio and AWP change in January of 2002. For example, the AWP for Lipitor 10MG increased 3.0% from January 1998 to January 1999. From January 1999 to January 2000, the AWP for Lipitor 10MG did not increase at all and from

85. Plaintiffs' allegations themselves suggest that market participants likely knew of the change in the AWP/WAC ratio and the artificial inflation in AWP. According to the Complaint (at ¶¶12-13), retail pharmacies likely knew because they allegedly realized increased profits that could be attributed to the actions of McKesson and FDB ("McKesson was proud of its efforts and boasted to its retail clients that McKesson 'had been working on AWP expansion with some success.'"). Similarly, according to the Complaint (at ¶¶148-151), manufacturers whose AWP increased also were aware of the increased markup over WAC.

January 2000 to January 2001, it increased 8.26%. So the average annual increase in AWP for Lipitor 10MG from 1998 to 2001 was around 3.4% per year. However, from January 2001 to January 2002, the AWP for Lipitor 10MG increased 13.54%, about four times the average annual increase for the three prior years.

66. It is difficult to believe that an AWP increase of this magnitude would go unnoticed by those who specialize in monitoring drug prices.⁸⁶ And, in fact, these large increases in AWPs for just a few major drugs apparently caused [REDACTED], one of the largest PBMs (serving thousands of TPPs⁸⁷), to notice the resulting one percent increase in overall AWP growth rate at the beginning of 2002, an increase in growth rate from 1.5 percent to 2.5 percent.⁸⁸

86. The ESI Drug Trend Reports track percentage increases in a list of to 50 drugs on an annual basis from 1999 through 2002. These reports show unusual spikes in the cost of particular Appendix A drugs occurring in 2002. For example, Claritin 10 mg is listed among the top 10 drugs in every Drug Trend Report from 1999 through 2002. The percentage increases in price in 1999, 2000 and 2001 are 2.5%, 8.8% and 9.3%, respectively. However, the percentage increase in price for Claritin 10 mg from 2001 to 2002 given in the Drug Trend Report is 21.1%, a substantially greater increase compared with earlier years. (http://www.express-scripts.com/our_company/news/industry_reports, accessed December 15, 2006)

87. See [REDACTED] 10-K filed 12/31/05, p. 27 ("We currently provide services to thousands of clients.").

88. [REDACTED]

67. PBMs are sophisticated operators in the drug industry. They use their size and access to data to mediate among manufacturers, TPPs, and retail pharmacies.⁸⁹ Therefore, it is highly unlikely that the increase in the AWP/WAC ratio would remain unknown to PBMs. These firms track drug prices and profit by being able to move demand to the least cost alternative drugs. PBMs' function is to intermediate between retail pharmacies, manufacturers and TPPs. A critical part of that function is to maintain and analyze drug price information, including AWP and WAC. The change in the AWP/WAC ratio alleged by plaintiffs was not hidden from PBMs because it was embodied in the WAC and AWP data used by the PBMs. Moreover, retail pharmacies receiving increased profits should have been aware of the increase in the AWP/WAC ratio. Indeed, plaintiffs allege that McKesson acted at the behest of retail pharmacies. Knowledge from retail pharmacies, however, flows to PBMs because a number of PBMs own mail-order retail pharmacies.

89. Dr. Hartman recognized the sophistication of PBMs in his December 2004 Declaration in the AWP MDL, Attachment C, p. C11 ("The PBMs are the entities with the most complete information regarding manufacturer rebates, reimbursements paid by TPPs and reimbursements required by retail pharmacies. PBMs act as agents to the TPPs with whom they contract to manage the TPPs pharmacy benefit plans and aggregate the TPPs insured lives with those of other client TPPs in order to obtain discounts, price offsets and other financial considerations from manufacturers through the exploitation of volume purchases and formulary designs. *By acting as agents to the TPPs, the PBMs are aware of competitive strategies employed by the TPPs they serve and the reimbursement rates they pay.* At the same time, the PBMs contract with drug manufacturers, agreeing to certain forms of compensation (rebates) for moving market share for the manufacturers to the TPPs. *By acting with the manufacturers, the PBMs are aware of the competitive financial incentives offered by the large innovator drug companies and the actual acquisition cost at which they are willing to sell their products.* Finally, the PBMs contract with retail pharmacies, specialty pharmacies and mail order pharmacies to include those providers in the PBM network, thereby moving market share to these retailer providers. As a result, the PBMs are aware of the competitive strategies used by and *the financial incentive offered by large and small retailers to PBMs to be included in the PBM networks.*" (emphasis in original))

68. Indeed, vertical integration between PBMs and pharmacies and between PBMs and TPPs shows that some TPPs had knowledge of the artificial inflation in AWP. Evaluating which TPPs were actually affected by the alleged scheme therefore requires an individualized evaluation of vertical integration at each level of the drug distribution chain.

69. The evidence I have seen shows that one of the largest PBMs, [REDACTED], knew of the changes in AWP/WAC ratios in early 2002 and shared that information with some or all of its TPPs.⁹⁰ For example, to an e-mail dated April 5, 2002, [REDACTED] attached the following memorandum apparently sent to TPP clients.

[REDACTED]

[REDACTED]

[REDACTED]

90. In April 2002, [REDACTED] sent letters to TPPs informing them of the change First DataBank had made in the AWP/WAC ratio. For example, on April 22, 2002, [REDACTED] sent a letter to [REDACTED] informing them of First DataBank's change in the AWP/WAC ratio for some drugs. [REDACTED]

91. The memorandum is attached to an e-mail from [REDACTED], dated April 5, 2002.

██████████

[REDACTED]

114

[illegible]

[REDACTED]

72. In summary, these e-mails show that [REDACTED] knew of the change in AWP/WAC ratio within the first months of the class period and was feeling pressure from some clients to respond with pricing concessions.

D. Variation Among Retail Pharmacies, PBMs and TPPs in Knowledge and Negotiating Power Leads to Need for Individualized Determination of Impact of the Alleged Scheme

73. The evidence presented above does not show that all PBMs and TPPs knew immediately about the alleged scheme and necessarily could have acted on that information. Instead, the evidence shows that some PBMs and TPPs knew of the change in AWP/WAC ratio (or simply of unusual changes in AWP), and that some PBMs and TPPs were in a position to act on that information. This evidence directly contradicts a critical assumption underlying Dr. Hartman's analysis -- that TPPs lacked any knowledge. The claimed class-wide impact and formulaic approach to damages require that the changes in AWP/WAC ratios were either unknown or not acted upon by all plaintiffs for the entire class period, August 2001 through March 2005. Instead, variation in knowledge and negotiating power (*i.e.*, leverage) suggests that

93. E-mail from [REDACTED],
March 19, 2002. [REDACTED]

the impact of the alleged scheme differs for each plaintiff and may have been zero (or perhaps even positive) for a number of TPPs.

74. The variation in knowledge and negotiating power stems from a number of sources. In particular, variation in vertical integration means that information flows from retail pharmacies to TPPs (via PBMs) may be direct and would have to be analyzed on an individual basis. An additional source of variation in knowledge and negotiating power results from differences in TPP size and ability to switch PBMs. Dr. Hartman's conclusion of class-wide impact requires an assumption that none of this variation exists. However, an economically meaningful evaluation of the impact of the alleged scheme requires an individualized analysis of each TPP's ownership structure and relationship with PBMs to determine whether the TPP had sufficient knowledge and negotiating power to respond to the artificial inflation in AWP.

V. DR. HARTMAN'S OPINION IS BASED ON A NUMBER OF SPECIFIC ASSUMPTIONS FOR WHICH THERE IS NO EMPIRICAL OR ECONOMIC SUPPORT

75. I now turn to the specific assumptions underlying Dr. Hartman's analysis and discuss the evidence (or lack of evidence) supporting these assumptions. As outlined above, there is an array of terms negotiated within particular PBM-TPP contracts that affect the amount of reimbursement paid by a particular TPP. The terms specified within the contract include discounts off AWP, dispensing fees, rebate pass-through percentage, administrative fees, minimum co-pays, risk-sharing terms and termination clauses. All of these individual terms are part of the package of terms negotiated between the PBM and each of its client TPPs. Accordingly, there are trade offs among these terms. For example, a particular TPP may be willing to have a relatively low discount off AWP in return for a relatively large rebate pass-through percentage. The particular package of terms negotiated between the PBM and each TPP

is a function of the TPP's preferences including its willingness to tolerate risk.⁹⁴ A critical factor affecting the negotiation of the package of terms is the AWP and expectations of inflation in AWP. For example, the realized reimbursement is a function of AWP and therefore the parties' negotiated discount off AWP depends on the level of AWP and expectations regarding its future growth. Accordingly, if there is a change in AWP or AWP inflation, one would expect other pricing terms to change as well – and for the changes to occur on an individualized basis because the particular terms of each contract are different. Dr. Hartman, however, assumes that no such individualized changes occur as a result of the artificial inflation in AWP caused by the alleged scheme for the entire Class Period of over 3.5 years.⁹⁵

76. Dr. Hartman claims that TPP reimbursements increase as a result of the alleged scheme based on his assertion that AWP is the basis for reimbursement in many TPP contracts. He cites Judge Saris' opinion (8/16/05) and the Berndt Report (2/9/05) to support the idea that

94. See Berndt Report, ¶159, for discussion of the trade off between discount off AWP and rebate pass-through percentage.

95. It is important to note that even if some of the market adjustment to the alleged scheme operates through changes in contract terms, one cannot conclude that there is class-wide impact even during the periods of contracts negotiated before implementation of the alleged scheme. First, there are over 10,000 potential plaintiffs each with a unique contract end date during the Class Period, because contracts are less than 3 years in duration. See [Proposed] Order Granting Plaintiffs' Amended Motion for Class Certification, December 20, 2006, ¶6, ("The Third-Party Payor Class consists of in excess of 10,000 Third-Party Payors throughout the United States,..."). Second, many contracts can be amended before termination. Third, there are a number of automatic market responses that do not depend on changes in contract terms such as "pass-through" contracts, rebates, plan design and capitation. For these reasons, determination of impact even during the initial contract period requires an individualized analysis.

AWP is an important basis for reimbursement.⁹⁶ Dr. Hartman, however, ignores the thrust of Dr. Berndt's analysis that AWP is not the price anyone pays.⁹⁷

77. The apparent confusion over the idea that an increase in AWP translates into increased TPP reimbursements stems from Dr. Hartman's misinterpretation of the use of AWP in contracts between TPPs and PBMs and between PBMs and retail pharmacies. The reimbursement rates in these contracts typically are written as AWP minus a percentage discount plus a dispensing fee. Accordingly, the reimbursement rate depends on AWP, the discount and the dispensing fee. Nevertheless, Dr. Hartman writes, that the proposed class includes only drugs where "the AWP is the basis for reimbursement."⁹⁸ Dr. Hartman's statement leads to the conclusion that an increase in AWP translates into increased reimbursement rates only if the discount and the dispensing fee are unchanged by the alleged scheme. Dr. Hartman relies on an assumption that other pricing terms are unaffected by the alleged scheme when he states that, "[c]hanges in the spread will change retailer profitability, everything else equal. Increases in the spread will increase retailer profitability."⁹⁹ The clause "everything else equal" is the key to this statement. Throughout all of his analysis, Dr. Hartman must maintain the assumption that

96. Hartman Declaration, fn 4, cites Judge Saris Opinion in the AWP MDL, August 16, 2005, p. 7 and Berndt Report, ¶¶16, 49, 55.

97. Even the Plaintiffs recognize that AWP and WAC are not actual transaction prices. See Complaint, ¶41 ("WAC represents a list price from manufacturer to wholesaler, while AWP represents a list price from wholesaler to dispenser (*e.g.*, pharmacy, physician, hospital, or other provider).") and Complaint, ¶36 ("Thus, while WAC may not represent *actual* acquisition cost (as wholesalers may obtain discounts through volume purchases or special deals, and as wholesalers' customers who also buy based on WAC may receive other price concessions charged back to the manufacturers), it is the baseline for most branded drug sales by manufacturers to national wholesalers." (emphasis in original)).

98. Hartman Declaration, ¶8 (emphasis in original).

99. Hartman Declaration, ¶9.

everything else is equal.¹⁰⁰ Otherwise it is an empirical question whether a change in the AWP/WAC ratio or in AWP would lead to counteracting market adjustments for each TPP. Dr. Hartman simply assumes that *all* contract terms for *all* TPPs are unaffected by the artificial inflation in AWP, rather than showing that that is factually true or even plausible, and rather than showing that that could conceivably be tested on a class-wide basis. Instead, plain economic logic and the evidence show that any artificial inflation of AWP is likely to cause some significant impacts on contract terms including the discounts and dispensing fees, that these market adjustments can nullify any harms to any market participant from the alleged artificial elevation of AWP, and that ascertaining whether this is so requires individual inquiries into the circumstances of the individual TPPs.

78. The assumptions that I identify in this section relate to the most obvious market mechanisms that can adjust to the changes in the AWP/WAC ratio or artificial inflation in AWP. There likely are other ways the market may adjust to the changes in artificial prices as the reimbursement rates and profits of market participants return to their levels that prevailed prior to the artificial change. The market factors that Dr. Hartman assumes are unaffected by the change in AWP/WAC ratio and the artificial inflation in AWP are the following:

- Discounts off AWP
- Dispensing fees and other fees
- Rebate pass-through percentage
- Risk-sharing terms
- Co-pay terms and plan design
- WAC

100. This assumption is contradicted by evidence that contract terms adjusted, even mid-contract, in response to the artificial increase in AWP. See, for example, [REDACTED] offer to [REDACTED] to increase discounts and reduce fees in correspondence in early 2003. [REDACTED]

79. As I explain below, some or all of these terms may change in response to the change in AWP/WAC ratio and the artificial inflation in AWP, and these changes are often implemented as contract amendments or are retroactive over existing contracts. Importantly, the market mechanisms that drive these changes do not require explicit knowledge of the alleged scheme, of changes in the AWP/WAC ratio or even artificial inflation in AWP. Nevertheless, variation in knowledge and negotiating power among class members will affect the speed of adjustment in these market mechanisms. Accordingly, a determination of whether there has been any impact from the alleged scheme on any individual plaintiff requires examination of individual characteristics relating to knowledge and negotiating power. For purposes of my analysis, I group market responses into two categories: (1) adjustments in pricing factors that lead to no net harm to any market participant, and (2) adjustments in pricing factors that represent a shifting of potential harm from TPPs to other market participants.

A. Adjustments in Pricing Factors Leading to No Net Harms

i. Dr. Hartman Assumes that the Discounts off AWP are Unaffected by the Alleged Scheme for the Whole Class Period

80. Dr. Hartman identifies two parameters in TPP contracts with PBMs: (1) the percentage discount off AWP (x% in Dr. Hartman's Report), and (2) the dispensing fee (df in Dr. Hartman's Report).¹⁰¹

81. Although Dr. Hartman concedes that "x% and df may vary somewhat among Class members,"¹⁰² he concludes that actual reimbursement (AA in Dr. Hartman's Report) is

101. As I explained above in ¶24, there are other terms specified in the PBM-TPP contract, such as rebate pass-through percentage, administrative fees, minimum co-pays and termination clauses. Although PBM-TPP contracts often have a term of three years, they are typically terminable without cause with 90 days notice. See [REDACTED] Deposition, p. 132 [REDACTED]

102. Hartman Declaration, ¶15.

increased when AWP is increased because he assumes that the alleged scheme has no effect on the discount (x%) or the dispensing fee (df).¹⁰³ That is, Dr. Hartman allows for variation in the discount and dispensing fee across TPPs and over time, but he assumes that the actual levels of these contract terms and the “but-for” levels of those terms are the same. Dr. Hartman’s formula for determining the reimbursement rate (AA) is the following.

$$AA = AWP (100 - x\%) + df \quad (1)$$

Equation (1) enables Dr. Hartman to predict a change in the reimbursement rate (AA) from a given change in the AWP because he assumes that the discount (x%) and the dispensing fee (df) are unchanged by the alleged scheme.

82. The following numerical example illustrates Dr. Hartman’s assumption that the discount off AWP is unaffected by the alleged scheme. Suppose that WAC is \$80 and that AWP increases from \$96 to \$100 as a result of an increase in the AWP/WAC ratio from 1.2 to 1.25. Suppose the contractual reimbursement is determined to be AWP minus 13 percent plus a dispensing fee of \$5.00. In that case, the initial reimbursement before the change in AWP/WAC ratio is \$88.52 ($\$88.52 = 1.2 \times \$80 \times (1 - 0.13) + \5.00). According to Dr. Hartman the increase in the AWP/WAC ratio causes the reimbursement to increase by \$3.48 to \$92 under the assumption of no change in the discount and the dispensing fee ($\$92 = 1.25 \times \$80 \times (1 - 0.13) + \$5.00$). Now suppose the discount increases to 17 percent as a result of the alleged scheme. In

(...continued)

103. Hartman Declaration, ¶21. Dr. Hartman does not address the rebate pass-through percentage in his formula. Instead, he assumes (at ¶25) that total rebates received by the PBM are a constant percentage of AWP (5%). This assumption means that the rebate dollars received by the TPP will increase with an increase in AWP for a given rebate pass-through percentage. However, if the rebate pass-through percentage changes as a result of the alleged scheme, then the ratio of rebates over AWP may increase as a result of the alleged scheme.

that situation the reimbursement after the change in the AWP/WAC ratio actually drops by \$0.52 from \$88.52 to \$88 ($\$88 = 1.25 \times \$80 \times (1 - 0.17) + \5.00). The same numerical example can be used to show that a reduction in the dispensing fee can offset some or all of the increase in AWP. Suppose in our example, the discount remains at 13 percent, but the dispensing fee drops from \$5.00 to \$1.50 after the change in the AWP/WAC ratio. Then the reimbursement would drop by \$0.02 from \$88.52 to \$88.50 ($\$88.50 = 1.25 \times \$80 \times (1 - 0.13) + \1.50).

As I explain in more detail below in Section VI, this example does not include an offset generated by the increased discount applied to non-Appendix A drugs. If the TPP is also purchasing self-administered brand-name drugs *not* listed in Appendix A, then it is even less likely that the increased AWP causes an increase in the actual reimbursement rate over all drug purchases.

These numerical examples illustrate that Dr. Hartman's prediction of the effect of a change in AWP on the reimbursement rate paid by TPPs depends critically on his assumption that the discount and the dispensing fee are unaffected by the change in the AWP/WAC ratio.

ii. Dr. Hartman Assumes that the Dispensing Fees and Other Fees are Unaffected by the Alleged Scheme for the Whole Class Period

83. The discount off of AWP might be one of the more straightforward adjustment mechanisms used in contracts between PBMs and TPPs, however, it is certainly not the only adjustment mechanism. There can also be changes to the dispensing fee, formulary management fees, or other PBM charges and these adjustments do not necessarily have to occur at the end of a contract period. One example of a contract amendment that included a change in fees is the [REDACTED] plan. [REDACTED]'s PBM, granted [REDACTED]'s request for contract renegotiation effective May 2003 and lowered its retail administrative fee from \$0.47 to \$0.30, and its

formulary administrative fee from \$0.30 per member per month to \$0.15 per member per month.¹⁰⁴

iii. Dr. Hartman Assumes that the Rebate Pass-Through Percentages are Unaffected by the Alleged Scheme for the Whole Class Period

84. A similar analysis applies to Dr. Hartman's assumption regarding the percentage pass-through of the PBM rebate. Dr. Hartman assumes that the volume of rebates may increase with the alleged scheme because he assumes that rebates as a percentage of AWP may be constant while AWP increases.¹⁰⁵ However, the relevant measure of rebate when considering the actual reimbursement of TPPs is the percentage of the manufacturer's rebate that the PBM passes through to the TPP. If, as a result of the alleged scheme, a TPP extracts a greater percentage pass-through, then the alleged scheme's affect on actual reimbursement will be reduced or completely eliminated.¹⁰⁶

85. The evidence I have reviewed shows that TPPs and PBMs negotiate changes in the rebate pass-through percentage in response to changes in market conditions.¹⁰⁷ The following are certain examples of PBM/TPP contracts with increasing rebate pass-through percentages.

104. [REDACTED] also increased the mail order brand discount from AWP minus 18% to AWP minus 20%. [REDACTED] estimated that these changes would create total estimated savings of over \$1.7 million. [REDACTED]

105. Hartman Declaration, ¶25.

106. As I explain below in Section VI, Dr. Hartman's assumption that the effect of rebates on the aggregate measure of damages is at most six percent of the damages figure may substantially understate the effect of rebates if the rebate pass-through rate changes as a result of the change in the AWP/WAC ratio.

107. See [REDACTED] Deposition, pp. 46-49, for discussion of negotiation with TPPs over the rebate pass-through percentage.

- [REDACTED]: The contract effective March 1, 1998 included a formulary savings provision that passed on 100 percent of formulary rebates received from drug manufacturers less a 50 percent Formulary management fee to be retained by [REDACTED].¹⁰⁸ A subsequent agreement, entered into as of September 1, 1999 changed the formulary savings provision reducing the Formulary management fee to 30 percent of the formulary savings thereby increasing the rebate pass-through from 50 percent to 70 percent.¹⁰⁹
- [REDACTED]: The initial contract between [REDACTED] was signed in November of 1990. There were amendments to this contract made on December 1, 1998 and on February 1, 2001.¹¹⁰ In the February 1, 2001 amendment, the rebate pass-through was 85 percent prior to April 1, 2001, was 85 percent or 90 percent from April 1, 2001 through July 31, 2001 (depending on the level of clinical management) and became 95 percent effective August 1, 2001.¹¹¹
- [REDACTED]: The first agreement in this series was effective August 1, 1995 with a rebate pass-through rate of 85 percent on rebates received on retail prescriptions.¹¹² In a letter written on October 22, 1996, and signed by [REDACTED] on December 20, 1996 this agreement was amended to include rebates received on mail prescriptions as well as retail prescriptions. This adjustment to the agreement was retroactive to the start of the initial agreement, August 1, 1995.¹¹³ Effective January 1, 1998 this agreement was amended to, among other things, increase the rebate pass-through to 90 percent of rebates attributable to mail and retail prescriptions.¹¹⁴ This 90 percent rebate pass-through percentage was maintained at 90 percent for the new contract between [REDACTED] and [REDACTED] effective January 1, 1999 through December 31, 2001.¹¹⁵ However, in January 1, 2001 this contract was amended to, among other things, increase

108. [REDACTED]

109. [REDACTED]

110. [REDACTED]

111. [REDACTED]

112. [REDACTED]

113. [REDACTED]

114. [REDACTED]

115. [REDACTED]

the rebate pass-through percentage to 95 percent from July 1, 2001 through December 31, 2001.¹¹⁶

- [REDACTED]: The first contract in this series was entered into on November 1, 1994 and stated that 60 percent of formulary rebates would be passed on to [REDACTED].¹¹⁷ This contract was amended and extended effective October 1, 1997.¹¹⁸ The amendment extended the contract through September 30, 2000 with an evergreen option and increased the rebate pass-through to 65 percent of formulary rebates. On October 1, 2000 this contract was amended again.¹¹⁹ In this amendment, the term of the contract was extended through September 30, 2003 with the rebate pass-through increased to 80 percent and a guaranteed minimum level of rebates implemented.
- [REDACTED]: Effective January 1, 1998, these parties entered into a prescription drug agreement, which stipulated that the rebate pass-through for [REDACTED] would be zero percent.¹²⁰ This contract was amended and extended on January 1, 2000. This amendment extended the contract to December 31, 2002 and increased the rebate pass-through percentage to 50 percent.¹²¹

86. As with observed increases in discounts off AWP and reductions in dispensing fees, this evidence on increases in rebate pass-through percentages is not necessarily tied specifically to the artificial inflation in AWP at issue in this case. Instead, this evidence shows that TPPs and PBMs routinely negotiate over the sharing of rebates as one of a number of ways that PBMs compensate TPPs in response to increases in drugs costs. Dr. Hartman's critical assumption is that none of the changes in the rebate pass-through percentage are the result of the change in the AWP/WAC ratio and the artificial inflation in AWP. This assumption is flawed and inconsistent with the empirical evidence and economic theory. As shown throughout this

116. [REDACTED]

117. [REDACTED]

118. [REDACTED]

119. [REDACTED]

120. [REDACTED]

121. [REDACTED]

section, each TPP faced its own set of circumstances and the effects of changes in AWP were not class wide, but unique to each TPP.

iv. Dr. Hartman Assumes that the Risk-Sharing Terms are Unaffected by the Alleged Scheme for the Whole Class Period

87. Another factor that must be considered when determining whether a TPP was harmed by the alleged scheme is the existence of risk-sharing terms within the agreements between PBMs and TPPs. The assumption made by Dr. Hartman is that the TPPs immediately and continuously bear the full burden of the increase in the AWP/WAC ratio. But it is not uncommon for TPPs and PBMs to design their contract arrangement to assign some or all of the risk of drug price increases to the PBM.

88. For example, in contracts written in 2000 that were in effect until at least 2002, the [REDACTED] plans (including [REDACTED]) negotiated an interesting provision in their contracts with [REDACTED] to attempt to protect against drug price inflation in specific instances where there was branded competition. They called these provisions "AWP Neutrality."¹²² These provisions were implemented for four pairs of drugs (Zocor and Lipitor, Prilosec and Prevacid, Claritin and Allegra, and Procardia and Adalat) and were designed to keep the BCBS plans paying the same prices within each pair for all four drug pairs. Using the example in the [REDACTED] contract, if the average per unit cost to [REDACTED] of Zocor in a given period was \$2.49 and the average per unit cost of Lipitor during the same period was \$1.89, then [REDACTED] would pay [REDACTED] the difference in the per unit costs ($\$2.49 - \$1.89 = \$0.60$) times the Zocor units for that period. Continuing with the example in the [REDACTED] contract, if total Zocor sales were 600 units for that period, the payment to [REDACTED]

122. [REDACTED]

[REDACTED] would be \$360 (\$0.60 times 600 units).¹²³ In situations where one drug is an Appendix A drug and the other is not, such provisions can lead to either an increase or a decrease in the overall reimbursement amount paid by the TPP, depending on whether the higher priced drug is the Appendix A drug. In this example, Zocor (the higher priced drug) is not an Appendix A drug while Lipitor is. Therefore, the increase in Lipitor's AWP relative to Zocor's AWP due to the alleged scheme would cause the overall reimbursement for [REDACTED] to increase. However, the effect on overall reimbursement would go the other way if the higher priced drug were an Appendix A drug. Consequently, determination of the impact of the alleged scheme requires an individualized analysis of contract terms that automatically share the risk of AWP increases between the PBM and the TPP.

89. Although "AWP Neutrality" provisions appear to be unique to Medco contracts, there are other forms of risk-sharing in other PBM-TPP contracts. For example, the second amendment to the January 1999 contract between [REDACTED] and [REDACTED], effective January 1, 2002, states "[REDACTED]"

[REDACTED]¹²⁴ The existence of these types of contract terms implies that a determination of impact requires an evaluation of each individual contract.

v. Contract Amendments and Retroactive Adjustments Indicate that Impact May Be Mitigated Even Within Pre-Existing Contracts

90. Dr. Hartman's methodology for determining class-wide damages also ignores the possibility that TPPs may have been in a position to amend an existing contract or receive

123. [REDACTED]

124. [REDACTED]

retroactively compensation from PBMs for any increases in overall drug expenses. There are a number of contract amendments in the examples of adjustments in discounts off AWP, changes in fees and changes in rebate pass-through percentage that I have cited above.¹²⁵

91. Examples of retroactive adjustment to contractual terms include the following.

[REDACTED] and [REDACTED] signed an agreement effective April 1, 2000 in which there was a Pharmacy Network Reimbursement Guarantee. This guarantee allowed either party to renegotiate the contract in the wake of an "Adjustment Event," where an Adjustment Event was defined as an event that would affect total contract cost by more than 0.75%. This is another example of a risk-sharing type agreement discussed above. In addition, this risk-sharing agreement also contained language that assured that any rate adjustment necessary after the Adjustment Event, "[REDACTED]"

Further, "[REDACTED]"

[REDACTED]¹²⁶ The key issue here is not whether [REDACTED] ever invoked this contract provision. Rather, the fact that these types of contract terms exist shows how individualized is this market and how any analysis of the effects of the change in AWP must also be conducted on an individualized basis. Indeed, the existence of retroactive adjustments to contractual terms makes the issue of whether a particular TPP was able to mitigate all potential harm through contract adjustments an individualized examination.

125. See [REDACTED]'s renegotiation of contract terms with [REDACTED] in 2003 cited above in ¶48; [REDACTED] contract amendments in 2003 cited above ¶48; [REDACTED] contract amendments in 1998 and 2001 cited above in ¶¶48, 85; [REDACTED] contract amendments in 1999 and 2001 cited above in ¶85; and [REDACTED] contract amendment in 2000 cited above in ¶85.

126. [REDACTED]

92. Another example of retroactive recoupment occurs in the [REDACTED] contracts with the [REDACTED] and [REDACTED]. The first contract in the series available to me was effective on August 1, 1995.¹²⁷ This contract included a provision that stated [REDACTED] would pass along to [REDACTED] 85 percent of the rebates received from manufacturers that were attributable to retail prescriptions paid for by [REDACTED]. In October 1996, this agreement was amended to extend the 85 percent rebate pass-through to rebates received for mail-order prescriptions in addition to rebates on retail prescriptions.¹²⁸ The interesting thing about this contract amendment is that it specified that this change would be retroactive back to August 1, 1995, the start of the original contract. This is another example of how the PBM / TPP contracts are flexible enough to account, or make up, for changes that occurred in previous periods.

B. Adjustments that Shift Potential Harm from TPPs to Other Market Participants

93. Dr. Hartman's conclusion that there has been a class-wide effect on each TPP's reimbursement depends on an implicit assumption that there is no market adjustment shifting the burden from TPPs to their members through changes in the realized co-pay amounts or through changes in plan design. Plan design typically refers to differences in co-pay designed to steer TPP members to particular drugs. For example, a three-tier plan design consists of different co-pay amounts for each tier of drug, where the first tier is generics, the second tier is preferred

127. [REDACTED]

128. [REDACTED]

brands and the third tier is non-preferred brands.¹²⁹ TPPs use co-pays to offset reimbursements and to create incentives for consumers to purchase preferred drug products or to patronize preferred retail pharmacies. The TPP, with approval from the PBM, has the discretion to increase co-pays for particular categories of drugs or members.¹³⁰ The co-pay can be used to steer customers to preferred drugs, either to a branded drug on a formulary in the case of two branded products used within a therapeutic class, or to a generic equivalent. In addition, the co-pay can be used to steer members from retail pharmacies to mail order pharmacies or from non-network to network pharmacies.¹³¹ If the co-pay amounts are increased as a result of the alleged scheme, then some or all of the assumed increase in reimbursement may be offset.¹³²

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129. See [REDACTED] Deposition, pp. 112-113. Other plan design features discussed by [REDACTED], pp. 123-130, include generic cap (member pays a penalty for not using the generic), deductible (an amount the member must pay before receiving reimbursement), out of pocket limits (aggregate amount paid by the member in a period time before the plan pays 100 percent of the drug cost) and indemnity provision (contract terms that deal with reimbursement out of network drug purchases).
130. Changes in co-pay and plan design can occur during the course of a TPP's contract with a PBM. See [REDACTED] Deposition, pp. 118-119 [REDACTED]
131. See [REDACTED] Deposition, pp. 147-148, for discussion of increased co-pays as drug costs increase [REDACTED]
132. See, for example, Cannon (Select Health) Deposition, p. 55 ("Q. Do you think the variety of different types of programs that any one employer is using has increased; in other words, they may have just had a co-pay -- tiered co-pay program five years ago, but now they have a tiered co-pay program, and a step-therapy program, and a generic substitution program? A. Yes. Q. So the variety in the types of cost-saving measures that employers have been using has increased over time? A. Yes.").

94. The individual TPP issues that may have mitigated or completely eliminated any harm to TPPs from the alleged scheme do not all stem from adjustments in the relationship between PBMs and TPPs. TPPs' members share the cost of drugs with TPPs. Just as the determination of whether reimbursement rates for each individual TPP actually increased is an empirical question, whether the estimated cost increase was actually borne by each individual TPP is also an empirical question requiring individualized analysis – a question that Dr. Hartman does not address.

95. The evidence shows that average co-pays during the class period were increasing and more consumers were being moved into programs with higher co-pay tiers. Table 4 shows percentage of covered workers who faced the various cost-sharing formulas in their prescription drug benefits from 2000 through 2005. In 2001, at the start of the class period, only 41 percent of workers were part of prescription drug plans with a third tier in their benefit package. This percentage has risen to 70 percent in 2005. Table 5 shows the average co-pays by type of drug for 2001 through 2005. The average co-pay for a preferred drug rose from \$15 in 2001 to \$22 in 2005. Even more dramatic was the rise in the average co-pay for non-preferred drugs, which rose from \$20 to \$35 over the same period.

96. This trend is confirmed by the TPPs [REDACTED]

[REDACTED] For example, the [REDACTED]

implemented two separate increases in member co-pays during the Class Period.¹³³ [REDACTED]
[REDACTED], the Administrator of the [REDACTED], testified that in response to escalations in cost the Teamsters went from a two-tiered co-pay structure (\$3 generic, \$9 brand) in 2001 and 2002 to a three-tier co-pay structure (\$3, \$10, \$20) in January 2003 and then to a four-tier co-pay structure (\$3, \$10, \$20, \$30) in July 2004.¹³⁴ These co-pay increases need to be considered when determining whether a particular TPP was impacted by the artificial inflation in AWP.¹³⁵

97. Again, the evidence of increased co-pays over time does not necessarily suggest that the change in the AWP/WAC ratio itself caused all of the increases in co-pays in every

133. Other examples of TPPs with increasing co-pays during the class period were New England Carpenters (See Buckley (NEC) Deposition, pp. 168-9 and N.E. Carpenters Exhibit 30), [REDACTED] (See [REDACTED] Deposition, pp. 310-2, 320), and BCBS of Montana (See, Wong (BCBSMT) Deposition, pp. 72-3 ("Q. And in reaction to that increased rate, did Blue Cross/Blue Shield of Montana implement some changes in order to control costs in the 2000 to 2001 period? A. You know, we discussed a lot of different options at that time, and did kind of plan for some clinical programs for the next couple years that we were going to roll out. We also--I think--I want to say roughly 2003, I think, we ended up making a--our--increasing our co-payments on our drugs. So, yeah, I mean, we definitely thought of some different things that we could do to help control some of our costs. Kind of steer drugs--or steer members also towards more generic drugs, because even at that time we were looking at, you know, trying to increase our generic utilization.")). Similarly, [REDACTED] testified that [REDACTED] employer/members' co-pays were generally going up during this period, [REDACTED] Deposition, pp. 100-1 [REDACTED]

134. [REDACTED] Deposition, pp. 48-50, 52-53.

135. In addition to variations in co-pays, changes in deductibles and exclusions from coverage would affect impact for each TPP. For example, by moving an Appendix A drug to a non-preferred, higher co-pay tier, the TPP would shift costs to members even without any changes to absolute co-pay levels.

contract. Nonetheless, the data show that co-pays have been increasing with inflation in AWP's.¹³⁶ Dr. Hartman must analyze what level of co-pays would have existed for each TPP but for the alleged scheme in order to rule out that any changes in the co-pay (and all other pricing terms) for particular TPPs were caused by the change in the AWP/WAC ratio. Dr. Hartman has not performed such an empirical analysis, has assumed that all adjustment mechanisms for all TPPs are unaffected by the change in the AWP/WAC ratio, and has failed to show that this assumption can be verified or even tested on a class-wide basis. .

98. Dr. Hartman also assumes that the change in the AWP/WAC ratio did not lead to efforts on the part of TPPs to shift some or all of their increased costs to their members through increased fees or premiums.¹³⁷ As with the potential increase in co-pays, the ability or incentive for each TPP to respond to an increase in AWP by increasing fees and premiums likely differs across TPPs and would require an individualized analysis to evaluate.

99. In addition to increasing co-pays, TPPs shift costs to members by imposing generic caps requiring the member to pay the difference between the brand-name drug and an

136. See, for example, Bradford J. Holmes, "Employers Step Up The Battle On Drugs Costs", WholeView TechStrategy Research Brief, Forrester Research, Inc., September 23, 2002, for a discussion of employers' responses to drug price inflation by moving employees to lower cost drugs ("Prescription drug costs continue to rise by double digits, and employers aren't taking the news lying down. To control costs, firms will pressure employees to choose cheaper drugs – with larger employers moving first"). Holmes cites the use of co-pays to affect members' choice of drugs ("Nearly half of our sample will raise copays for the nonpreferred drugs on their formularies. Another 31% will move to either a three-tier or a four-tier formulary, which will discourage use of nonpreferred drugs with progressively higher out-of-pocket charges. The most aggressive 8% of respondents intend to pare back the number of drugs on their formulary list.")

137. See [REDACTED] Deposition, pp. 118-119, for discussion of the use of co-pays to shift consumption from drugs in a "nonpreferred group" to drugs in a "preferred group." In addition, [REDACTED] indicates (at pp. 126-127) that deductibles are contained in contract provisions between TPPs, employers and PBMs.

C. Assumed Increase in AWP Relative to its Level But For the Alleged Scheme

i. Dr. Hartman Assumes that WAC is Unaffected by the Alleged Scheme for the Whole Class Period

138. See also [REDACTED] Deposition, pp. 109-10

executive summary of his report that “the determinants of the WAC reported to FDB did not change for the subject drugs during this period,...”¹³⁹ In the report itself, he clarifies that this is an assumption when he states, “The determinants of WAC are not alleged to have been altered by the conspiracy.”¹⁴⁰

102. The logic of economic impact on TPPs through an artificial increase in AWP requires that Dr. Hartman’s assumption that WAC was unaffected be true. Put differently, suppose for some drugs the change in the AWP/WAC ratio slowed the rate of increase in WAC compared to what would have occurred absent the alleged scheme. Then there would not necessarily be an increase in AWP relative to its level but-for the alleged scheme and therefore no economic impact.¹⁴¹ I do not contend that the alleged scheme necessarily caused a decrease in WAC relative to its “but-for” level. Instead, I simply point out that Dr. Hartman’s conclusion of class-wide economic impact rests on his assumption that WAC was unaffected by the alleged scheme and Dr. Hartman has not provided support for this assumption.

139. Hartman Declaration, Executive Summary.

140. Hartman Declaration, ¶13. See also Hartman Deposition, October 4, 2006, p. 80 (“In this matter, I – what I’ve been asked to assume is that there were WACs and , essentially, implicit AWP’s, or markups reported to First DataBank from the manufacturers, and that McKesson and First DataBank incrementally added to an AWP that the manufacturer had wanted -- had determined to -- ...-- whatever their strategies were, that’s -- they reported it and then it was inflated by --”).

141. An example of how manufacturers may have moderated WAC price increases in light of the change in the AWP/WAC ratio is contained in [REDACTED]’s analysis of potential price increases in November 2002. In a presentation titled “Price Action Recommendation,” November 19, 2002, [REDACTED], Pricing Strategy Manager, discusses the downside of a price increase following [REDACTED]

See also [REDACTED]

103. Dr. Hartman states that manufacturers identify the AWP/WAC spread “deemed optimal for their drug products.”¹⁴² This statement implies that manufacturers may react to a change in AWP/WAC ratio (spread) that is not optimal. However, Dr. Hartman assumes that that there is no reduction in WAC relative to its “but-for” level as a result of the alleged scheme. By assuming that WAC is unchanged, the change in the AWP/WAC ratio translates into a predictable increase in AWP.

104. The following example illustrates the effect of Dr. Hartman’s assumption that WAC is unaffected by the alleged scheme. Suppose that before imposition of the ratio change in 2002 WAC is \$24. With an AWP/WAC ratio of 1.25, the AWP for the drug is \$30. Dr. Hartman concludes that the “but-for” level of AWP for that drug in 2002 is \$28.80. This follows from Dr. Hartman’s assumption that the alleged scheme had no effect on WAC, which he assumes is fixed at \$24. ($\$28.80 = 1.2 \times \24) In this example, he assumes that WAC would be \$24 in 2002 regardless of the change in the AWP/WAC ratio. However, suppose the manufacturer would have increased WAC to \$25, but decided to keep WAC at \$24 in order to offset the inflationary effect of the increased AWP/WAC ratio. Put differently, suppose WAC would have risen to \$25 in 2002 had there been no change in the AWP/WAC ratio – that is, the “but-for” level of WAC is \$25 in 2002, while the actual level is \$24 in 2002. In that case, the “but-for” level of AWP is \$30 ($\$30 = 1.2 \times \25). Therefore, Dr. Hartman would conclude erroneously that the alleged scheme led to a \$1.20 increase in AWP ($\$1.20 = \$30 - \28.80) when it actually led to no change in AWP because the “but-for” and actual levels of AWP were \$30.

142. Hartman Declaration, ¶10.

ii. Dr. Hartman Assumes that the AWP/WAC Ratio for all Appendix A Drugs would have been 1.20 But For the Alleged Scheme for the Whole Class Period

105. An additional assumption in Dr. Hartman's analysis is that the "but-for" level of the AWP/WAC ratio for all Appendix A drugs is 1.20 for the whole Class Period. Such an assumption derives from plaintiffs' selection of NDCs to be included in Appendix A based on which NDCs were observed to have a change in the AWP/WAC ratio from 1.20 to 1.25 during the Class Period. The problem with the assumption of "but-for" AWP/WAC ratio of 1.20 is that prior to August 1, 2001 there was an ongoing process of increasing AWP/WAC ratios from 1.20 to 1.25. In particular, plaintiffs' own data cited in the Complaint at ¶10 show that a number of NDCs had increases in AWP/WAC ratio from 1.20 to 1.25 prior to the Class Period.¹⁴³

106. In addition, plaintiffs claim that manufacturers "acquiesced" to the change in AWP/WAC ratio.¹⁴⁴ Plaintiffs in the AWP MDL claim that manufacturers sought increases in AWP.¹⁴⁵ If plaintiffs' claims in both cases are correct, then it is possible that some of the artificial inflation in AWP for some Appendix A drugs claimed in the current litigation would have occurred even in the absence of the alleged scheme in this case.

143. Increases in AWP/WAC ratio to 1.25 typically occurred as a result of a merger of two manufacturers where one had a ratio of 1.20 and the other a ratio of 1.25. See Complaint, ¶46 ("Indeed, prior to the Scheme alleged in this case, it was extraordinarily rare for the WAC/AWP spread to be changed for any particular NDC, and in the few isolated situations where that did occur, a particular market-based reason existed which was known to all participants in the marketplace (e.g., a merger of drug companies necessitating uniformity of particular prices).")

144. Complaint, ¶151.

145. See Judge Saris Opinion in the AWP MDL, August 16, 2005, p. 1 ("Consumers and third party payors (TPPs) brought suit against pharmaceutical manufacturers alleging that manufacturers fraudulently inflated drug prices by misstating average wholesale prices (AWPs) of their drugs in industry publications.")

107. In summary, Dr. Hartman claims that the “but-for” level of AWP can be determined by simply applying a factor of 1.20 to actual levels of WAC for each Appendix A drug throughout the Class Period. However, he has not shown that but for the alleged scheme all Appendix A drugs would have had an AWP/WAC ratio that would have stayed at 1.20 throughout the Class Period, nor has he shown that the observed actual levels of WAC for each Appendix A drug would have existed but for the alleged scheme. In order to show impact for any TPP, Dr. Hartman must first determine the appropriate “but-for” level of AWP for each Appendix A drug in each period. Then he must evaluate for each TPP the composition of Appendix A drugs consumed by its members in order to determine whether there could have been any impact from the alleged scheme. Such an evaluation requires detailed and individualized data and analysis for each TPP.

VI. DR. HARTMAN'S FORMULAIC METHODOLOGY FAILS TO SHOW CLASS-WIDE IMPACT IF HIS ASSUMPTIONS FAIL

108. Dr. Hartman provides a simple algebraic formula for estimating aggregate damages. This formula does not rely on any statistical analysis or test of whether the alleged scheme had any impact on the net reimbursements paid by TPPs or on TPP profits.¹⁴⁶ Instead, Dr. Hartman uses his over-simplified formula to claim that aggregate damages are approximately

146. Economists typically estimate damages resulting from a conspiracy to elevate price are estimated using an econometric model to explain movements in the price controlling for observable factors that potentially influence that price including the conspiracy. In this way, one can estimate the “but-for” prices that would have existed absent the conspiracy and test whether there is a statistically significant difference between the actual and “but-for” prices. Dr. Hartman does not attempt to do such a study.

4.25 percent of WAC, assuming a 15 percent discount off AWP.¹⁴⁷ I will demonstrate that Dr. Hartman's failure to test the validity of his assumptions renders his model meaningless in determining whether there has been any class-wide impact as a result of the alleged scheme. In particular, it is important to recognize that adjustments in pricing factors apply to all self-administered branded prescription drugs covered by each TPP, not just the Appendix A drugs. That means that if, for example, a TPP obtains a greater discount off AWP as an adjustment in response to the artificial inflation in AWP, then the greater discount applies both to Appendix A drugs experiencing the artificial inflation in AWP and to non-Appendix A drugs where there is no artificial inflation in AWP. In effect, the TPP is receiving a benefit from the alleged scheme in the form of an offsetting reimbursement reduction for non-Appendix A drugs. Dr. Hartman, however, ignores this offset and therefore necessarily finds impact even when there may be none, or when there may be a net benefit to some TPPs. This is not merely a damages problem, but a fundamental flaw in Dr. Hartman's conclusion of class-wide impact from the alleged scheme.

109. Dr. Hartman's error flows from the simplicity of his formula, based on at least four critical assumptions: (1) WAC is unchanged by the alleged scheme; (2) the discount (x%) is unchanged by the alleged scheme; (3) the dispensing fee (df) is unchanged by the alleged scheme; and (4) rebates passed through to the TPP as a percentage of AWP are unchanged by the alleged scheme.¹⁴⁸

147. Hartman Declaration, ¶21 and Hartman Deposition, pp. 369-370. In other words, all Dr. Hartman does is multiply the five percent increase in the markup by the remaining percentage of AWP after an assumed discount of 15 percent to generate an aggregate damages formula of 4.25 percent of WAC ($0.0425 = (1 - 0.15) \times 0.05$). Dr. Hartman has not determined whether this aggregate damages formula would accurately reflect the damages incurred by individual plaintiffs. See Hartman Deposition, pp. 351-52.

148. Dr. Hartman also assumes that there is no adjustment in co-pays, plan design or any other factors that would reduce the effective reimbursement paid by the TPP.

110. Using Dr. Hartman's algebraic formula, it can be shown that if any one of these assumptions fails, then his formula leads to an overstatement of damages and a finding of impact even when there may be none. In addition, I show that Dr. Hartman's claim that the impact of rebates on his estimate of aggregate damages is limited to six percent is simply an artifact of his unsupported assumption that rebates as a percentage of AWP are unaffected by the alleged scheme.

A. **Dr. Hartman's Damages Formula Overstates Damages and Finds Impact Even If There is None**

111. I now examine Dr. Hartman's aggregate damages formula to show that relaxation of one of his assumptions – no effect on the discount off AWP – leads to a finding of impact even in individual cases where there is none. Dr. Hartman states that his simple formula rests on his assumption that the discount percentage ($x\% = 1 - p$) and the dispensing fee (df) "remain unaffected by the Scheme."¹⁴⁹ Dr. Hartman's formula is derived as follows. He begins with the understanding that the alleged scheme caused AWP to increase from 1.2 WAC to 1.25 WAC or

$$AWP^{pre} = 1.2 \text{ WAC}$$

$$AWP^{post} = 1.25 \text{ WAC}$$

Dr. Hartman then defines reimbursement (AA) in each period to be a function of AWP, the discount off AWP ($x\% = 1 - p$) and the dispensing fee (df).

$$AA^{pre} = p \text{ AWP}^{pre} + df$$

$$AA^{post} = p \text{ AWP}^{post} + df$$

149. Hartman Declaration, ¶21. Although he does not make the assumptions explicit, Dr. Hartman also assumes that WAC is unaffected by the alleged scheme, rebates pass-through to the TPP and quantity of Appendix A drugs (Q) are unaffected by the alleged scheme.

where p is defined as one minus the discount percentage ($p = 1 - x\%$). For example, if the discount percentage is 14%, then $p = 0.86$. Notice that p and df do not have the “pre” or “post” superscript. This is because Dr. Hartman assumes that these parameters are unchanged by the alleged scheme. As I show below these assumptions simplify his formula, but bias his result in his favor.

112. Dr. Hartman then concludes that aggregate damages are the difference between post- and pre- reimbursement multiplied by the quantity of Appendix A drugs (Q_A).

$$D = \Delta AA Q_A = (AA^{\text{post}} - AA^{\text{pre}}) Q_A = p (1.25 \text{ WAC} - 1.2 \text{ WAC}) Q_A \text{ or}$$

$$D = 0.05 p \text{ WAC } Q_A$$

113. Now suppose Dr. Hartman is wrong about his assumption that the discount off AWP is unaffected by the alleged scheme for some TPPs.¹⁵⁰ For example, suppose some TPP clients of Express Scripts obtained an increased discount off AWP as a result of knowledge of the change in the AWP/WAC ratio. Implementing Dr. Hartman’s formula without the assumption of no change in the discount requires adding the “pre” and “post” superscripts to the p term.

$$D = \Delta AA Q_A = (p^{\text{post}} 1.25 \text{ WAC} - p^{\text{pre}} 1.20 \text{ WAC}) Q_A$$

or

$$D = 1.25 (p^{\text{post}} - 0.96 p^{\text{pre}}) \text{ WAC } Q_A$$

150. I could construct similar modifications to the formula relaxing the assumptions that the dispensing fee (df), WAC or the rebate pass-through are unaffected. Likewise, it is straightforward to adjust the model to account for increased co-pays or other fees from consumers. Any one of these modifications leads to a lessening or complete nullification of damages.

114. Notice that damages goes to zero as discounts increase. For example, suppose there is a TPP with the “pre-scheme” discount is 14 percent ($p^{\text{pre}} = 0.86$) and the “post-scheme” discount is 18 percent ($p^{\text{post}} = 0.82$). In that example, true injury would be zero, but Dr. Hartman would have found substantial damage for that TPP.

115. Interestingly, it does not even take such a change in the discount of four percentage points to generate zero injury. The reason for this is that when the discount adjusts, the adjustment applies to both Appendix A drugs and non-Appendix A drugs, generating an offset that is ignored by Dr. Hartman. Suppose total quantity of self-administered brand-name prescription drugs (Q) can be broken down into Appendix A drugs and non-Appendix A drugs with weights defined as w_A and $1 - w_A$, where w_A is the Appendix A drugs’ share of a TPPs total expenditure on self-administered brand-name prescription drugs ($0 < w_A < 1$).

116. In this case, damages would be described by the following formula.

$$D = w_A 1.25 (p^{\text{post}} - 0.96 p^{\text{pre}}) \text{ WAC } Q + (1 - w_A) (p^{\text{post}} - p^{\text{pre}}) \text{ WAC } Q$$

The second term of the formula $((1 - w_A) (p^{\text{post}} - p^{\text{pre}}) \text{ WAC } Q)$ will be negative because $p^{\text{post}} < p^{\text{pre}}$. Because the discount applies to all self-administered brand-name drugs, any increase in the discount resulting from the change in the AWP/WAC ratio creates an offset to damages in the form of reduced reimbursements on non-Appendix A drugs. The net effect of the change in reimbursement, therefore, is a weighted average of the increase in reimbursements for Appendix A drugs and the decrease in reimbursements for non-Appendix A drugs. The resulting impact on any particular TPP then depends on the change in discount and the relative spending on Appendix A drugs versus non-Appendix A drugs.

117. A numerical example illustrates how little the change in discount can be to completely offset any injury. Suppose a TPP spends 60 percent of its expenditures on Appendix

A drugs ($w_A = 0.6$) and the “pre-scheme” discount is 14 percent ($p^{\text{pre}} = 0.86$).¹⁵¹ In that circumstance, injury would be zero if the “post-scheme” discount is 16.25 percent ($p^{\text{post}} = 0.8375$) or greater. The change in discount required to completely offset the effect of the change in the AWP/WAC ratio declines as the percentage of expenditure on Appendix A drugs declines. In this example, assuming Appendix A drugs represent 60 percent of the TPP’s drug volume, the required increase in discount off AWP to generate no impact is only 2.5 percentage points.

B. Dr. Hartman’s Formulaic Analysis of Rebates Does Not Account For the Effect of a Potential Increase in the Rebate Pass-Through Percentage

118. I now turn to a second error that flows from Dr. Hartman’s simple formula. Dr. Hartman claims to make a conservative assumption that rebates amount to approximately five percent of AWP.¹⁵² He then shows that the impact of such an assumption is an approximately six percent (5.9%) reduction in his estimate of aggregate damages. Notwithstanding that such an analysis averages the effect of rebates across plaintiffs regardless of individual characteristics of each TPP with respect to rebates, Dr. Hartman ignores the question of what happens if the amount of rebate actually received by each TPP increases as a percentage of AWP.

119. TPPs generally do not receive the manufacturers’ rebates.¹⁵³ They are paid to PBMs. PBMs then pass on to their client TPPs some fraction or all of the rebate. The fractions can vary from zero to 100 percent and are typically negotiated in the TPP-PBM contract. If the

151. As shown in Table 1, aggregate spending on Appendix A drugs is roughly equal to aggregate spending on a set of non-Appendix A drugs within the same therapeutic classes. Thus the assumption of 60 percent weight for Appendix A drugs may overstate the relative spending on Appendix A drugs for average but not necessarily all TPPs.

152. Hartman Declaration, ¶¶24-25. Dr. Hartman admits that rebates may increase as a result of the alleged scheme if they are calculated on the basis of market share, total sales, or formulary access. However, he does not consider whether the percentage pass-through from PBMs to TPPs changed as a result of the alleged scheme.

153. Some TPPs negotiate directly with manufacturers for rebates. For example, Harvard Pilgrim, [REDACTED] and Select Health. See fn 15.

pass-through, either as a dollar amount per prescription or as a percentage of the rebate, increased as a result of the alleged scheme, then the dollar amount of the rebate received by the TPP may increase as a percentage of the AWP. As shown above, the evidence shows that Dr. Hartman's assumption is incorrect. At the very least, the analysis needs to incorporate the changes in rebates. But more importantly, since the changes were individualized, the analysis cannot be conducted on a class-wide basis.

120. I will now use Dr. Hartman's algebraic approach to the rebate question to show that a small change in the rebate as a percentage of AWP leads to a much greater reduction in aggregate damages than the six percent figure obtained by Dr. Hartman.

121. Dr. Hartman deals with rebates by assuming that the rebate percentage of AWP is five percent with or without the alleged scheme and that the average discount is 15 percent ($p = 0.85$). Given Dr. Hartman's flawed assumptions, this means that the incremental rebate ($\Delta R = R^{\text{post}} - R^{\text{pre}}$) relative to the increase in reimbursement (ΔAA) is 5.9%.

$$R^{\text{pre}} = 0.05 \times \text{AWP}^{\text{pre}} = 0.05 \times 1.20 \text{ WAC}$$

$$R^{\text{post}} = 0.05 \times \text{AWP}^{\text{post}} = 0.05 \times 1.25 \text{ WAC}$$

$$\Delta AA = 0.85 \times 0.05 \text{ WAC (assuming } p = 0.85)$$

$$\Delta R / \Delta AA = (0.0025 \text{ WAC}) / (0.0425 \text{ WAC}) = 5.9\%$$

122. If I relax the assumption that rebates as a percentage of AWP are constant, then the result of a 5.9 percent reduction in damages collapses. To see this let r^{pre} be the "pre-scheme" rebates as a share of AWP and let r^{post} be the "post-scheme" rebates as a share of AWP.

$$R^{\text{pre}} = r^{\text{pre}} \text{AWP}^{\text{pre}} = r^{\text{pre}} 1.2 \text{ WAC}$$

$$R^{\text{post}} = r^{\text{post}} \text{AWP}^{\text{post}} = r^{\text{post}} 1.25 \text{ WAC}$$

$$\Delta R / \Delta AA = (1.25 r^{\text{post}} - 1.2 r^{\text{pre}}) \text{ WAC} / (0.0425 \text{ WAC}) \text{ (assuming } p = 0.85)$$

$$= (1.25 r^{\text{post}} - 1.20 r^{\text{pre}}) / 0.0425$$

Now suppose r increases from 5% to 5.5% as a result of the alleged scheme.

$$\begin{aligned}\Delta R/\Delta AA &= (1.25 \times 0.055 - 1.2 \times 0.05) / 0.0425 = (0.06875 - 0.06) / 0.0425 \\ &= 0.2059 = 20.59\%\end{aligned}$$

123. This numeric example shows that Dr. Hartman's damages reduction factor would increase from six percent to 21 percent with only a modest increase in rebates as a percentage of AWP from five percent to 5.5 percent.¹⁵⁴ Such an increase in the rebates as a percentage of AWP can occur if the change in the AWP/WAC ratio led to an increase in the pass-through of rebates for any particular TPP.

VII. CONCLUSION

124. Dr. Hartman's conclusion of class-wide impact relies upon the assumption that when the AWP/WAC ratio increased, *all* other pricing factors remained the same and that *all* other contract terms remained unaffected by the alleged scheme. Such an assumption is wholly inconsistent with economic theory and the available evidence. As presented throughout this report, the empirical evidence shows that the factors driving the difference between AWP and actual prices did change during the class period, and did so on an individual, not class, basis. Since the actual prices paid by putative class members did not change in unison in reaction to the alleged scheme, individualized inquiries are needed to ascertain whether different TPPs' actual prices changed at all, and if so by how much. The report presents a significant amount of empirical evidence, consistent with economic theory, that the TPPs had a wide variety of mechanisms to protect themselves from an artificial rise in some AWP levels, and that different

154. Moreover, this numeric example does not account for offsetting impact of the increased rebates on non-Appendix A drugs. As a general matter, Dr. Hartman's damages formula fails to account for the offsets that result from application of market adjustments to all drugs purchased by the TPP, including non-Appendix A drugs.

TPPs used different means to counteract the artificial rise in some AWP levels resulting from the alleged scheme.

125. Therefore, evaluating whether the alleged scheme had any impact on a particular TPP requires an individualized analysis to investigate whether, and to what degree, the particular TPP utilized different market mechanisms to counteract the rise in the AWP/WAC ratio and the artificial inflation in AWP. Dr. Hartman has failed to undertake such an analysis and consequently he cannot validly conclude that there was class-wide impact. Moreover, Dr. Hartman has failed to identify a methodology, and the analysis presented here shows that there is no methodology that can be validly applied on a class-wide basis to ascertain whether there was class-wide impact. The facts plainly show that impact can be ascertained only on an individualized basis.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on January 24, 2007.


Robert D. Willig

Exhibit 1

Curriculum Vitae

December 2005

Name: Robert D. Willig

Address: 220 Ridgeview Road, Princeton, New Jersey 08540

Birth: 1/16/47; Brooklyn, New York

Marital Status: Married, four children

Education: Ph.D. Economics, Stanford University, 1973
Dissertation: Welfare Analysis of Policies
Affecting Prices and Products.
Advisor: James Rosse

M.S. Operations Research, Stanford University, 1968.

A.B. Mathematics, Harvard University, 1967.

Professional Positions:

Professor of Economics and Public Affairs, Princeton University, 1978-.

Principal External Advisor, Infrastructure Program, Inter-American Development Bank, 6/97-8/98.

Deputy Assistant Attorney General, U.S. Department of Justice, 1989-1991.

Supervisor, Economics Research Department, Bell Laboratories, 1977-1978.

Visiting Lecturer (with rank of Associate Professor), Department of Economics and Woodrow Wilson School, Princeton University, 1977-78 (part time).

Economics Research Department, Bell Laboratories, 1973-77.

Lecturer, Economics Department, Stanford University, 1971-73.

Other Professional Activities:

Director, Competition Policy Associates, Inc., 2003-2005

Advisory Board, Electronic Journal of Industrial Organization and Regulation Abstracts, 1996-.

Advisory Board, Journal of Network Industries, 2004-.

Visiting Faculty Member (occasional), International Program on Privatization and Regulatory Reform, Harvard Institute for International Development, 1996-2000.

Member, National Research Council Highway Cost Allocation Study Review Committee, 1995-98.

Member, Defense Science Board Task Force on the Antitrust Aspects of Defense Industry Consolidation, 1993-94.

Editorial Board, Utilities Policy, 1990-2001

Leif Johanson Lecturer, University of Oslo, November 1988.

Member, New Jersey Governor's Task Force on Market-Based Pricing of Electricity, 1987-89.

Co-editor, Handbook of Industrial Organization, 1984-89.

Associate Editor, Journal of Industrial Economics, 1984-89.

Director, Consultants in Industry Economics, Inc., 1983-89, 1991-94.

Fellow, Econometric Society, 1981-.

Organizing Committee, Carnegie-Mellon-N.S.F. Conference on Regulation, 1985.

Board of Editors, American Economic Review, 1980-83.

Nominating Committee, American Economic Association, 1980-1981.

Research Advisory Committee, American Enterprise Institute, 1980-1986.

Editorial Board, M.I.T. Press Series on Government Regulation of Economic Activity, 1979-93.

Program Committee, 1980 World Congress of the Econometric Society.

Program Committee, Econometric Society, 1979, 1981, 1985.

Organizer, American Economic Association Meetings: 1980, 1982.

American Bar Association Section 7 Clayton Act Committee, 1981.

Principal Investigator, NSF grant SOC79-0327, 1979-80; NSF grant 285-6041, 1980-82; NSF grant SES-8038866, 1983-84, 1985-86.

Aspen Task Force on the Future of the Postal Service, 1978-80.

Organizing Committee of Sixth Annual Telecommunications Policy Research Conference, 1977-78.

Visiting Fellow, University of Warwick, July 1977.

Institute for Mathematical Studies in the Social Sciences, Stanford University, 1975.

Consulting: Bell Laboratories, 1978-79; AT&T, 1978-89, 1991-; Conrail 1978-87, 1991-97; Federal Trade Commission, 1979-82, 1994-96; Pennsylvania Bell, 1980; Simpson Thatcher Bartlett, 1980, 1993-98; American Association of Railroads, 1981, 1985; Math-tech, 1981; Union Pacific Railroad, 1981, 1995-99; Family Lines Rail System, 1982; Pepper, Hamilton, and Scheetz, 1981-87, 1991-98, 2001; Siemens Corp., 1982; Board of Governors of U. S. Postal Service, 1981; OECD, 1983-85, 1991-95; Sidley & Austin, 1983-89, 1991- 2005; U.S. Postal Service, 1983-84; Echlin Inc., 1982-83; United Airlines, 1983, 1991-98; Consultants in Industry Economics, 1983-89, 1991- 2005; Wiley, Malehorn & Sirota, 1983-89; City of Newark, 1984; Arnold & Porter, 1986-89, 1991-2000, 2004- ; Howrey & Simon, 1985-88, 1993-2005; Kodak, 1987-89; Crowell & Moring, 1988; Viacom 1989, 1991-98; Bell Atlantic, 1991-94; Intel, 1991-93; AOPL, 1993; IBM, 1993-96; Merck, 1993-1995; Harkins Cunningham, 1993-96; Boeing, 1993-98; Niagara Mohawk, 1994; PSE&G, 1994-1996; Microsoft, 1994; Coca-Cola Co., 1994-01; Digital Equipment Corp. 1997-98; World Bank 1994-98; Inter-American Development Bank, 1997-2000; Steptoe & Johnson, 1997-; Air Transport Association of America, 1998; American Electric Power, 1999-2001; Cravath, Swaine & Moore, 1998- ; Skadden Arps, 1999-2001; Amgen, 2000-02; Comcast, 2000; Williams & Connolly, 2000; New Power Corporation, 2001. Freddie Mac, 2002; BMG, 2003-2005; Qantas and Air New Zealand, 2003-2004; Competition Policy Associates, Inc. 2003-2005.

Published Articles and Book Chapters:

"The Risk of Contagion from Multi-Market Contact," (with Charles Thomas), The International Journal of Industrial Organization, forthcoming 2006.

"Economic Effects of Antidumping Policy," reprinted in The WTO and Anti-Dumping, Douglas Nelson (ed.), Edward Elgar, forthcoming 2006.

"Pareto-Superior Nonlinear Outlay Schedules," reprinted in The Economics of Public Utilities, Ray Rees (ed.), Edward Elgar, forthcoming 2006.

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"Consumer's Surplus Without Apology," reprinted in Readings in Social Welfare: Theory and Policy, Robert E. Kuenne (ed.), Blackwell, 2000, pp. 86-97; reprinted in Readings in Microeconomic Theory, M. M. La Manna (ed.), Dryden Press, 1997, pp. 201-212.

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Unpublished Papers and Reports:

"Assessment of U.S. Merger Enforcement Policy," statement before the Antitrust Modernization Commission, 11/17/05.

"Investment is Appropriately Stimulated by TELRIC," in Pricing Based on Economic Cost, 12/2003.

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"Stimulating Investment and the Telecommunications Act of 1996," (with J. Bigelow, W. Lehr and S. Levinson), 2002.

"An Economic Analysis of Spectrum Allocation and Advanced Wireless Services," (with Martin N. Baily, Peter R. Orszag, and Jonathan M. Orszag), 2002

"Effective Deregulation of Residential Electric Service," 2001

"Anticompetitive Forced Rail Access," (with W. J. Baumol), 2000

"The Scope of Competition in Telecommunications" (with B. Douglas Bernheim), 1998

"Why Do Christie and Schultz Infer Collusion From Their Data? (with Alan Kleidon), 1995.

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"Economic Analysis of Section 337: The Balance Between Intellectual Property Protection and Protectionism," (with J. Ordover) 1990.

"The Effects of Capped NTS Charges on Long Distance Competition," (with M. Katz).

"Discussion of Regulatory Mechanism Design in the Presence of Research Innovation, and Spillover Effects," 1987.

"Industry Economic Analysis in the Legal Arena," 1987.

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"Competition-Related Trade Issues," report prepared for OECD.

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Invited Conference Presentations:

World Bank Seminar

“The Dangers of Over-Ambitious Regulation”	2005
ABA Section of Antitrust Law 2005 Fall Forum	
“Is There a Gap Between the Guidelines and Agency Practice?”	2005
Hearing of Antitrust Modernization Commission	
“Assessment of U.S. Merger Enforcement Policy”	2005
LEAR Conference on Advances in the Economics of Competition Law	
“Exclusionary Pricing Practices”	2005
Annual Antitrust Law Institute	
“Cutting Edge Issues in Economics”	2005
PRIOR Symposium on States and Stem Cells	
“Assessing the Economics of State Stem Cell Programs”	2005
ABA Section of Antitrust Law – AALS Scholars Showcase	
“Distinguishing Anticompetitive Conduct”	2005
Allied Social Science Associations National Convention	
“Antitrust in the New Economy”	2005
ABA Section of Antitrust Law 2004 Fall Forum	
“Advances in Economic Analysis of Antitrust”	2004
Phoenix Center State Regulator Retreat	
“Regulatory Policy for the Telecommunications Revolution”	2004
OECD Competition Committee	
“Use of Economic Evidence in Merger Control”	2004
Justice Department/Federal Trade Commission Joint Workshop	
“Merger Enforcement”	2004
Phoenix Center Annual U.S. Telecoms Symposium	
“Incumbent Market Power”	2003
Center for Economic Policy Studies Symposium on Troubled Industries	
“What Role for Government in Telecommunications?”	2003
Princeton Workshop on Price Risk and the Future of the Electric Markets	
“The Structure of the Electricity Markets”	2003
2003 Antitrust Conference	

“International Competition Policy and Trade Policy”	2003
International Industrial Organization Conference	
“Intellectual Property System Reform”	2003
ABA Section of Antitrust Law 2002 Fall Forum	
“Competition, Regulation and Pharmaceuticals”	2002
Fordham Conference on International Antitrust Law and Policy	
“Substantive Standards for Mergers and the Role of Efficiencies”	2002
Department of Justice Telecom Workshop	
“Stimulating Investment and the Telecommunications Act of 1996”	2002
Department of Commerce Conference on the State of the Telecom Sector	
“Stimulating Investment and the Telecommunications Act of 1996”	2002
Law and Public Affairs Conference on the Future of Internet Regulation	
“Open Access and Competition Policy Principles”	2002
Center for Economic Policy Studies Symposium on Energy Policy	
“The Future of Power Supply”	2002
The Conference Board: Antitrust Issues in Today’s Economy	
“The 1982 Merger Guidelines at 20”	2002
Federal Energy Regulatory Commission Workshop	
“Effective Deregulation of Residential Electric Service”	2001
IPEA International Seminar on Regulation and Competition	
“Electricity Markets: Deregulation of Residential Service”	2001
“Lessons for Brazil from Abroad”	2001
ABA Antitrust Law Section Task Force Conference	
“Time, Change, and Materiality for Monopolization Analyses”	2001
Harvard University Conference on American Economic Policy in the 1990s	
“Comments on Antitrust Policy in the Clinton Administration”	2001
Tel-Aviv Workshop on Industrial Organization and Anti-Trust	
“The Risk of Contagion from Multimarket Contact”	2001
2001 Antitrust Conference	
“Collusion Cases: Cutting Edge or Over the Edge?”	2001
“Dys-regulation of California Electricity”	2001

FTC Public Workshop on Competition Policy for E-Commerce "Necessary Conditions for Cooperation to be Problematic"	2001
HIID International Workshop on Infrastructure Policy "Infrastructure Privatization and Regulation"	2000
Villa Mondragone International Economic Seminar "Competition Policy for Network and Internet Markets"	2000
New Developments in Railroad Economics: Infrastructure Investment and Access Policies "Railroad Access, Regulation, and Market Structure"	2000
The Multilateral Trading System at the Millennium "Efficiency Gains From Further Liberalization"	2000
Singapore – World Bank Symposium on Competition Law and Policy "Policy Towards Cartels and Collusion"	2000
CEPS: Is It a New World?: Economic Surprises of the Last Decade "The Internet and E-Commerce"	2000
Cutting Edge Antitrust: Issues and Enforcement Policies "The Direction of Antitrust Entering the New Millennium"	2000
The Conference Board: Antitrust Issues in Today's Economy "Antitrust Analysis of Industries With Network Effects"	1999
CEPS: New Directions in Antitrust "Antitrust in a High-Tech World"	1999
World Bank Meeting on Competition and Regulatory Policies for Development "Economic Principles to Guide Post-Privatization Governance"	1999
1999 Antitrust Conference "Antitrust and the Pace of Technological Development"	1999
	1999
HIID International Workshop on Privatization, Regulatory Reform and Corporate Governance "Privatization and Post-Privatization Regulation of Natural Monopolies"	1999
The Federalist Society: Telecommunications Deregulation: Promises Made, Potential Lost? "Grading the Regulators"	1999
Inter-American Development Bank: Second Generation Issues In the Reform	

Of Public Services	
"Post-Privatization Governance"	1999
"Issues Surrounding Access Arrangements"	1999
Economic Development Institute of the World Bank -- Program on Competition Policy	
"Policy Towards Horizontal Mergers"	1998
Twenty-fifth Anniversary Seminar for the Economic Analysis Group of the Department of Justice	
"Market Definition in Antitrust Analysis"	1998
HIID International Workshop on Privatization, Regulatory Reform and Corporate Governance	
"Infrastructure Architecture and Regulation: Railroads"	1998
EU Committee Competition Conference -- Market Power	
"US/EC Perspective on Market Definition"	1998
Federal Trade Commission Roundtable	
"Antitrust Policy for Joint Ventures"	1998
1998 Antitrust Conference	
"Communications Mergers"	1998
The Progress and Freedom Foundation Conference on Competition, Convergence, and the Microsoft Monopoly	
Access and Bundling in High-Technology Markets	1998
FTC Program on The Effective Integration of Economic Analysis into Antitrust Litigation	
The Role of Economic Evidence and Testimony	1997
FTC Hearings on Classical Market Power in Joint Ventures	
Microeconomic Analysis and Guideline	1997
World Bank Economists --Week IV Keynote	
Making Markets More Effective With Competition Policy	1997
Brookings Trade Policy Forum	
Competition Policy and Antidumping: The Economic Effects	1997
University of Malaya and Harvard University Conference on The Impact of Globalisation and Privatisation on Malaysia and Asia in the Year 2020	
Microeconomics, Privatization, and Vertical Integration	1997
ABA Section of Antitrust Law Conference on The Telecommunications Industry	

Current Economic Issues in Telecommunications	1997
Antitrust 1998: The Annual Briefing The Re-Emergence of Distribution Issues	1997
Inter-American Development Bank Conference on Private Investment, Infrastructure Reform and Governance in Latin America & the Caribbean Economic Principles to Guide Post-Privatization Governance	1997
Harvard Forum on Regulatory Reform and Privatization of Telecommunications in the Middle East Privatization: Methods and Pricing Issues	1997
American Enterprise Institute for Public Policy Research Conference Discussion of Local Competition and Legal Culture	1997
Harvard Program on Global Reform and Privatization of Public Enterprises "Infrastructure Privatization and Regulation: Freight"	1997
World Bank Competition Policy Workshop "Competition Policy for Entrepreneurship and Growth"	1997
Eastern Economics Association Paul Samuelson Lecture "Bottleneck Access in Regulation and Competition Policy"	1997
ABA Annual Meeting, Section of Antitrust Law "Antitrust in the 21st Century: The Efficiencies Guidelines"	1997
Peruvian Ministry of Energy and Mines Conference on Regulation of Public Utilities "Regulation: Theoretical Context and Advantages vs. Disadvantages"	1997
The FCC: New Priorities and Future Directions "Competition in the Telecommunications Industry"	1997
American Enterprise Institute Studies in Telecommunications Deregulation "The Scope of Competition in Telecommunications"	1996
George Mason Law Review Symposium on Antitrust in the Information Revolution "Introduction to the Economic Theory of Antitrust and Information"	1996
Korean Telecommunications Public Lecture "Market Opening and Fair Competition"	1996
Korea Telecommunications Forum	

“Desirable Interconnection Policy in a Competitive Market”	1996
European Association for Research in Industrial Economics Annual Conference “Bottleneck Access: Regulation and Competition Policy”	1996
Harvard Program on Global Reform and Privatization of Public Enterprises “Railroad and Other Infrastructure Privatization”	1996
FCC Forum on Antitrust and Economic Issues Involved with InterLATA Entry “The Scope of Telecommunications Competition”	1996
Citizens for a Sound Economy Policy Watch on Telecommunications Interconnection “The Economics of Interconnection”	1996
World Bank Seminar on Experiences with Corporatization “Strategic Directions of Privatization”	1996
FCC Economic Forum on the Economics of Interconnection Lessons from Other Industries	1996
ABA Annual Meeting, Section of Antitrust Law The Integration, Disintegration, and Reintegration of the Entertainment Industry	1996
Conference Board: 1996 Antitrust Conference How Economics Influences Antitrust and Vice Versa	1996
Antitrust 1996: A Special Briefing Joint Ventures and Strategic Alliances	1996
New York State Bar Association Section of Antitrust Law Winter Meeting Commentary on Horizontal Effects Issues	1996
FTC Hearings on the Changing Nature of Competition in a Global and Innovation-Driven Age Vertical Issues for Networks and Standards	1995
Wharton Seminar on Applied Microeconomics Access Policies with Imperfect Regulation	1995
Antitrust 1996, Washington D.C. Assessing Joint Ventures for Diminution of Competition	1995
ABA Annual Meeting, Section of Antitrust Law	

Refusals to Deal -- Economic Tests for Competitive Harm	1995
FTC Seminar on Antitrust Enforcement Analysis Diagnosing Collusion Possibilities	1995
Philadelphia Bar Education Center: Antitrust Fundamentals Antitrust--The Underlying Economics	1995
Vanderbilt University Conference on Financial Markets Why Do Christie and Schultz Infer Collusion From Their Data?	1995
ABA Section of Antitrust Law Chair=s Showcase Program Discussion of Telecommunications Competition Policy	1995
Conference Board: 1995 Antitrust Conference Analysis of Mergers and Joint Ventures	1995
ABA Conference on The New Antitrust: Policy of the '90s Antitrust on the Super Highways/Super Airways	1994
ITC Hearings on The Economic Effects of Outstanding Title VII Orders "The Economic Impacts of Antidumping Policies"	1994
OECD Working Conference on Trade and Competition Policy "Empirical Evidence on The Nature of Anti-dumping Actions"	1994
Antitrust 1995, Washington D.C. "Rigorous Antitrust Standards for Distribution Arrangements"	1994
ABA -- Georgetown Law Center: Post Chicago-Economics: New Theories - New Cases? "Economic Foundations for Vertical Merger Guidelines"	1994
Conference Board: Antitrust Issues in Today's Economy "New Democrats, Old Agencies: Competition Law and Policy"	1994
Federal Reserve Board Distinguished Economist Series "Regulated Private Enterprise Versus Public Enterprise"	1994
Institut d'Etudes Politiques de Paris "Lectures on Competition Policy and Privatization"	1993

Canadian Bureau of Competition Policy Academic Seminar Series, Toronto. "Public Versus Regulated Private Enterprise"	1993
CEPS Symposium on The Clinton Administration: A Preliminary Report Card "Policy Towards Business"	1993
Columbia Institute for Tele-Information Conference on Competition in Network Industries, New York, NY "Discussion of Deregulation of Networks: What Has Worked and What Hasn't"	1993
World Bank Annual Conference on Development Economics "Public Versus Regulated Private Enterprise"	1993
Center for Public Utilities Conference on Current Issues Challenging the Regulatory Process "The Economics of Current Issues in Telecommunications Regulation"	1992
"The Role of Markets in Presently Regulated Industries"	1992
The Conference Board's Conference on Antitrust Issues in Today's Economy, New York, NY "Antitrust in the Global Economy"	1992
"Monopoly Issues for the '90s"	1993
Columbia University Seminar on Applied Economic Theory, New York, NY "Economic Rationales for the Scope of Privatization"	1992
Howrey & Simon Conference on Antitrust Developments, Washington, DC "Competitive Effects of Concern in the Merger Guidelines"	1992
Arnold & Porter Colloquium on Merger Enforcement, Washington, DC "The Economic Foundations of the Merger Guidelines"	1992
American Bar Association, Section on Antitrust Law Leadership Council Conference, Monterey, CA "Applying the 1992 Merger Guidelines"	1992
OECD Competition Policy Meeting, Paris, France "The Economic Impacts of Antidumping Policy"	1992
Center for Public Choice Lecture Series, George Mason University Arlington, VA "The Economic Impacts of Antidumping Policy"	1992
Brookings Institution Microeconomics Panel, Washington, DC, "Discussion of the Evolution of Industry Structure"	1992
AT&T Conference on Antitrust Essentials	

"Antitrust Standards for Mergers and Joint Ventures"	1991
ABA Institute on The Cutting Edge of Antitrust: Market Power "Assessing and Proving Market Power: Barriers to Entry"	1991
Second Annual Workshop of the Competition Law and Policy Institute of New Zealand "Merger Analysis, Industrial Organization Theory, and Merger Guidelines"	1991
"Exclusive Dealing and the <u>Fisher & Paykel</u> Case"	1991
Special Seminar of the New Zealand Treasury "Strategic Behavior, Antitrust, and The Regulation of Natural Monopoly"	1991
Public Seminar of the Australian Trade Practices Commission "Antitrust Issues of the 1990's"	1991
National Association of Attorneys General Antitrust Seminar "Antitrust Economics"	1991
District of Columbia Bar's 1991 Annual Convention "Administrative and Judicial Trends in Federal Antitrust Enforcement"	1991
ABA Spring Meeting "Antitrust Lessons From the Airline Industry"	1991
Conference on The Transition to a Market Economy - Institutional Aspects "Anti-Monopoly Policies and Institutions"	1991
Conference Board's Thirtieth Antitrust Conference "Antitrust Issues in Today's Economy"	1991
American Association for the Advancement of Science Annual Meeting "Methodologies for Economic Analysis of Mergers"	1991
General Seminar, Johns Hopkins University "Economic Rationales for the Scope of Privatization"	1991
Capitol Economics Speakers Series "Economics of Merger Guidelines"	1991
CRA Conference on Antitrust Issues in Regulated Industries "Enforcement Priorities and Economic Principles"	1990
Pepper Hamilton & Scheetz Anniversary Colloquium "New Developments in Antitrust Economics"	1990

PLI Program on Federal Antitrust Enforcement in the 90's	
"The Antitrust Agenda of the 90's"	1990
FTC Distinguished Speakers Seminar	
"The Evolving Merger Guidelines"	1990
The World Bank Speakers Series	
"The Role of Antitrust Policy in an Open Economy"	1990
Seminar of the Secretary of Commerce and Industrial Development of Mexico	
"Transitions to a Market Economy"	1990
Southern Economics Association	
"Entry in Antitrust Analysis of Mergers"	1990
"Discussion of Strategic Investment and Timing of Entry"	1990
American Enterprise Institute Conference on Policy Approaches to the Deregulation of Network Industries	
"Discussion of Network Problems and Solutions"	1990
American Enterprise Institute Conference on Innovation, Intellectual Property, and World Competition	
"Law and Economics Framework for Analysis"	1990
Banco Nacional de Desenvolvimento Economico Social Lecture	
"Competition Policy: Harnessing Private Interests for the Public Interest"	1990
Western Economics Association Annual Meetings	
"New Directions in Antitrust from a New Administration"	1990
"New Directions in Merger Enforcement: The View from Washington"	1990
Woodrow Wilson School Alumni Colloquium	
"Microeconomic Policy Analysis and Antitrust--Washington 1990"	1990
Arnold & Porter Lecture Series	
"Advocating Competition"	1991
"Antitrust Enforcement"	1990
ABA Antitrust Section Convention	
"Recent Developments in Market Definition and Merger Analysis"	1990
Federal Bar Association	
"Joint Production Legislation: Competitive Necessity or Cartel Shield?"	1990
Pew Charitable Trusts Conference	

"Economics and National Security"	1990
ABA Antitrust Section Midwinter Council Meeting	
"Fine-tuning the Merger Guidelines"	1990
"The State of the Antitrust Division"	1991
International Telecommunications Society Conference	
"Discussion of the Impact of Telecommunications in the UK"	1989
The Economists of New Jersey Conference	
"Recent Perspectives on Regulation"	1989
Conference on Current Issues Challenging the Regulatory Process	
"Innovative Pricing and Regulatory Reform"	1989
"Competitive Wheeling"	1989
Conference Board: Antitrust Issues in Today's Economy	
"Foreign Trade Issues and Antitrust"	1989
McKinsey & Co. Mini-MBA Conference	
"Economic Analysis of Pricing, Costing, and Strategic Business Behavior"	1989
	1994
Olin Conference on Regulatory Mechanism Design	
"Revolutions in Regulatory Theory and Practice: Exploring The Gap"	1989
University of Dundee Conference on Industrial Organization and Strategic Behavior	
"Mergers in Differentiated Product Industries"	1988
Leif Johanson Lectures at the University of Oslo	
"Normative Issues in Industrial Organization"	1988
Mergers and Competitiveness: Spain Facing the EEC	
"Merger Policy"	1988
"R&D Joint Ventures"	1988
New Dimensions in Pricing Electricity	
"Competitive Pricing and Regulatory Reform"	1988
Program for Integrating Economics and National Security: Second Annual Colloquium	
"Arming Decisions Under Asymmetric Information"	1988
European Association for Research in Industrial Economics	
"U.S. Railroad Deregulation and the Public Interest"	1987
"Economic Rationales for the Scope of Privatization"	1989

"Discussion of Licensing of Innovations"	1990
Annenberg Conference on Rate of Return Regulation in the Presence of Rapid Technical Change	
"Discussion of Regulatory Mechanism Design in the Presence of Research, Innovation, and Spillover Effects"	1987
Special Brookings Papers Meeting	
"Discussion of Empirical Approaches to Strategic Behavior"	1987
"New Merger Guidelines"	1990
Deregulation or Regulation for Telecommunications in the 1990's	
"How Effective are State and Federal Regulations?"	1987
Conference Board Roundtable on Antitrust	
"Research and Production Joint Ventures"	1990
"Intellectual Property and Antitrust"	1987
Current Issues in Telephone Regulation	
"Economic Approaches to Market Dominance: Applicability of Contestable Markets"	1987
Harvard Business School Forum on Telecommunications	
"Regulation of Information Services"	1987
The Fowler Challenge: Deregulation and Competition in The Local Telecommunications Market	
"Why Reinvent the Wheel?"	1986
World Bank Seminar on Frontiers of Economics	
"What Every Economist Should Know About Contestable Markets"	1986
Bell Communications Research Conference on Regulation and Information	
"Fuzzy Regulatory Rules"	1986
Karl Eller Center Forum on Telecommunications	
"The Changing Economic Environment in Telecommunications: Technological Change and Deregulation"	1986
Railroad Accounting Principles Board Colloquium	
"Contestable Market Theory and ICC Regulation"	1986
Canadian Embassy Conference on Current Issues in Canadian -- U.S. Trade and Investment	
"Regulatory Revolution in the Infrastructure Industries"	1985
Eagleton Institute Conference on Telecommunications in Transition	
"Industry in Transition: Economic and Public Policy Overview"	1985

Brown University Citicorp Lecture "Logic of Regulation and Deregulation"	1985
Columbia University Communications Research Forum "Long Distance Competition Policy"	1985
American Enterprise Institute Public Policy Week "The Political Economy of Regulatory Reform"	1984
MIT Communications Forum "Deregulation of AT&T Communications"	1984
Bureau of Census Longitudinal Establishment Data File and Diversification Study Conference "Potential Uses of The File"	1984
Federal Bar Association Symposium on Joint Ventures "The Economics of Joint Venture Assessment"	1984
Hoover Institute Conference on Antitrust "Antitrust for High-Technology Industries"	1984
NSF Workshop on Predation and Industrial Targeting "Current Economic Analysis of Predatory Practices"	1983
The Institute for Study of Regulation Symposium: Pricing Electric, Gas, and Telecommunications Services Today and for the Future "Contestability As A Guide for Regulation and Deregulation"	1984
University of Pennsylvania Economics Day Symposium "Contestability and Competition: Guides for Regulation and Deregulation"	1984
Pinhas Sapir Conference on Economic Policy in Theory and Practice "Corporate Governance and Market Structure"	1984
Centre of Planning and Economic Research of Greece "Issues About Industrial Deregulation"	1984
"Contestability: New Research Agenda"	1984
Hebrew and Tel Aviv Universities Conference on Public Economics "Social Welfare Dominance Extended and Applied to Excise Taxation"	1983
NBER Conference on Industrial Organization and International Trade "Perspectives on Horizontal Mergers in World Markets"	1983

Workshop on Local Access: Strategies for Public Policy "Market Structure and Government Intervention in Access Markets"	1982
NBER Conference on Strategic Behavior and International Trade "Industrial Strategy with Committed Firms: Discussion"	1982
Columbia University Graduate School of Business, Conference on Regulation and New Telecommunication Networks "Local Pricing in a Competitive Environment"	1982
International Economic Association Roundtable Conference on New Developments in the Theory of Market Structure "Theory of Contestability"	1982
"Product Dev., Investment, and the Evolution of Market Structures"	1982
N.Y.U. Conference on Competition and World Markets: Law and Economics "Competition and Trade Policy--International Predation"	1982
CNRS-ISPE-NBER Conference on the Taxation of Capital "Welfare Effects of Investment Under Imperfect Competition"	1982
Internationales Institut für Management und Verwaltung Regulation Conference "Welfare, Regulatory Boundaries, and the Sustainability of Oligopolies"	1981
NBER-Kellogg Graduate School of Management Conference on the Econometrics of Market Models with Imperfect Competition "Discussion of Measurement of Monopoly Behavior: An Application to the Cigarette Industry"	1981
The Peterkin Lecture at Rice University "Deregulation: Ideology or Logic?"	1981
FTC Seminar on Antitrust Analysis "Viewpoints on Horizontal Mergers"	1982
"Predation as a Tactical Inducement for Exit"	1980
NBER Conference on Industrial Organization and Public Policy "An Economic Definition of Predation"	1980
The Center for Advanced Studies in Managerial Economics Conference on The Economics of Telecommunication "Pricing Local Service as an Input"	1980
Aspen Institute Conference on the Future of the Postal Service "Welfare Economics of Postal Pricing"	1979

Department of Justice Antitrust Seminar "The Industry Performance Gradient Index"	1979
Eastern Economic Association Convention "The Social Performance of Deregulated Markets for Telecom Services" 1979	
Industry Workshop Association Convention "Customer Equity and Local Measured Service"	1979
Symposium on Ratemaking Problems of Regulated Industries "Pricing Decisions and the Regulatory Process"	1979
Woodrow Wilson School Alumni Conference "The Push for Deregulation"	1979
NBER Conference on Industrial Organization "Intertemporal Sustainability"	1979
World Congress of the Econometric Society "Theoretical Industrial Organization"	1980
Institute of Public Utilities Conference on Current Issues in Public Utilities Regulation "Network Access Pricing"	1978
ALI-ABA Conference on the Economics of Antitrust "Predatoriness and Discriminatory Pricing"	1978
AEI Conference on Postal Service Issues "What Can Markets Control?"	1978
University of Virginia Conference on the Economics of Regulation "Public Interest Pricing"	1978
DRI Utility Conference "Marginal Cost Pricing in the Utility Industry: Impact and Analysis"	1978
International Meeting of the Institute of Management Sciences "The Envelope Theorem"	1977
University of Warwick Workshop on Oligopoly "Industry Performance Gradient Indexes"	1977
North American Econometric Society Convention "Intertemporal Sustainability"	1979
"Social Welfare Dominance"	1978

"Economies of Scope, DAIC, and Markets with Joint Production"	1977
Telecommunications Policy Research Conference	
"Transition to Competitive Markets"	1986
"InterLATA Capacity Growth, Capped NTS Charges and Long Distance Competition"	1985
"Market Power in The Telecommunications Industry"	1984
"FCC Policy on Local Access Pricing"	1983
"Do We Need a Regulatory Safety Net in Telecommunications?"	1982
"Anticompetitive Vertical Conduct"	1981
"Electronic Mail and Postal Pricing"	1980
"Monopoly, Competition and Efficiency": Chairman	1979
"A Common Carrier Research Agenda"	1978
"Empirical Views of Ramsey Optimal Telephone Pricing"	1977
"Recent Research on Regulated Market Structure"	1976
"Some General Equilibrium Views of Optimal Pricing"	1975
National Bureau of Economic Research Conference on Theoretical Industrial Organization	
"Compensating Variation as a Measure of Welfare Change"	1976

Conference on Pricing in Regulated Industries: Theory & Application "Ramsey Optimal Pricing of Long Distance Telephone Services"	1977
NBER Conference on Public Regulation "Income Distributional Concerns in Regulatory Policy-Making"	1977
Allied Social Science Associations National Convention "Merger Guidelines and Economic Theory"	1990
Discussion of "Competitive Rules for Joint Ventures"	1989
"New Schools in Industrial Organization"	1988
"Industry Economic Analysis in the Legal Arena"	1987
"Transportation Deregulation"	1984
Discussion of "Pricing and Costing of Telecommunications Services"	1983
Discussion of "An Exact Welfare Measure"	1982
"Optimal Deregulation of Telephone Services"	1982
"Sector Differentiated Capital Taxes"	1981
"Economies of Scope"	1980
"Social Welfare Dominance"	1980
"The Economic Definition of Predation"	1979
Discussion of "Lifeline Rates, Succor or Snare?"	1979
"Multiproduct Technology and Market Structure"	1978
"The Economic Gradient Method"	1978
"Methods for Public Interest Pricing"	1977
Discussion of "The Welfare Implications of New Financial Instruments"	1976
"Welfare Theory of Concentration Indices"	1976
Discussion of "Developments in Monopolistic Competition Theory"	1976
"Hedonic Price Adjustments"	1975
"Public Good Attributes of Information and its Optimal Pricing"	1975
"Risk Invariance and Ordinally Additive Utility Functions"	1974
"Consumer's Surplus: A Rigorous Cookbook"	1974
University of Chicago Symposium on the Economics of Regulated Public Utilities "Optimal Prices for Public Purposes"	1976
American Society for Information Science "The Social Value of Information: An Economist's View"	1975
Institute for Mathematical Studies in the Social Sciences Summer Seminar "The Sustainability of Natural Monopoly"	1975
U.S.-U.S.S.R. Symposium on Estimating Costs and Benefits of Information Services "The Evaluation of the Economic Benefits of Productive Information"	1975
NYU-Columbia Symposium on Regulated Industries "Ramsey Optimal Public Utility Pricing"	1975

Research Seminars:

Bell Communications Research (2)	University of California, San Diego
Bell Laboratories (numerous)	University of Chicago
Department of Justice (3)	University of Delaware
Electric Power Research Institute	University of Florida
Federal Reserve Board	University of Illinois
Federal Trade Commission (4)	University of Iowa (2)
Mathematica	Universite Laval
Rand	University of Maryland
World Bank (3)	University of Michigan
Carleton University	University of Minnesota
Carnegie-Mellon University	University of Oslo
Columbia University (4)	University of Pennsylvania (3)
Cornell University (2)	University of Toronto
Georgetown University	University of Virginia
Harvard University (2)	University of Wisconsin
Hebrew University	University of Wyoming
Johns Hopkins University (2)	Vanderbilt University
M. I. T. (4)	Yale University (2)
New York University (4)	Princeton University (many)
Northwestern University (2)	Rice University
Norwegian School of Economics and Business Administration	Stanford University (5) S.U.N.Y. Albany

Expert Testimony Provided in the Last Four Years

1. Amgen Inc. Claimant v. Ortho Pharmaceutical Corp., Respondent and Counter-Claimant; Arbitration before the Honorable Frank J. McGarr Arbitrator; Expert Report 6/14/2001, Deposition 12/13/2001. Trial testimony 4/10-11/2002, 4/22/2002.
2. In the matter of Application of EchoStar Communications Corporation, General Motors Corporation, Hughes Electronics Corporation and EchoStar Communications Corporation, For Authority to Transfer Control, Before the Federal Communications Commission, Declaration of Robert Willig on behalf of the applicants, 12/3/01 and 2/25/02.
3. In the Matter of Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services, Before the Federal Communications Commission, CC Docket No. 01-337, Declaration of Robert Willig, 3/1/02.
4. In the Matter of Schering-Plough Corporation, a corporation; Upsher-Smith Laboratories Inc. a corporation; and American Home Products Corporation, a Corporation; Before the Federal Trade Commission, Docket No. 9297; Expert Report 10/8/2001; Deposition 12/7/01 and 2/25/02. Trial testimony 3/8/02.
5. In the Matter of Central Garden and Pet Company v. The Scotts Company, et al., in the United States District Court, Northern District of California, Case Number C-00-2465 MMC(ADRX); Expert Report 3/1/2002; Deposition 4/1/2002.
6. Sarah Futch Hall, et. al. v. United Airlines et. al.; In the United States District Court for the Eastern District of North Carolina Southern Division; No.: 7:00-CV-123-BR(1); Expert report 11/15/2002; Deposition 12/17/2002; Rebuttal Report 12/23/2002; Supplemental Declaration 3/6/2003.
7. Vantico Holding, S.A., et al. v. Apollo Management, et al.; United States District Court, Southern District of New York; Case Number 03 Civ. 0768 (JGK). Expert Report 2/10/2003; Trial Testimony 2/12/2003.
8. In the matter of Application by Air New Zealand Limited and Qantas Airways Limited for Authorisation to enter a strategic Alliance Agreement and Application by Qantas Airways Ltd. to subscribe for up to 22.5% of the voting equity in Air New Zealand Ltd., Before the New Zealand Commerce Commission; Reports 6/20/03; 7/28/2003; Conference testimony, 8/20-22/2003.
9. EchoStar Satellite, L.L.C., *f/k/a* EchoStar Satellite Corporation vs. Viacom, Inc., et al., United States District Court, Northern District of California; Case Number C-04-00049 CW; Declaration 1/7/2004; Reply Declaration 1/15/2004; Deposition 2/17/2004; Supplemental Declaration 2/20/2004.

00049 CW; Declaration 1/7/2004; Reply Declaration 1/15/2004; Deposition 2/17/2004; Supplemental Declaration 2/20/2004.

10. Marriott International, Inc., et al. v. CTF Hotel Holdings, Inc., and Hotel Property Investments (B.V.I.) Ltd., International Center for Dispute Resolution, American Arbitration Association, Case Number 50-T-168-00171-2; Expert Report, 1/23/2004; Deposition, 2/26/2004.

11. In the Matter of an appeal from determinations of the Commerce Commission Between Air New Zealand Limited and Qantas Airways Limited and Commerce Commission, In the High Court of New Zealand Auckland Registry Commercial List; CIV 20034046590; Affidavit of Robert Willig and Margaret Guerin-Calvert; 4/15/2004; trial testimony and cross-examination, 7/13-16/2004.

12. In the Matter of Aspen Technology Corporation; Before the Federal Trade Commission, Docket No. 9310; Expert Report, 4/23/2004.

13. In The Matter of A La Carte and Themed Tier Programming and Pricing Options for Programming Distribution on Cable Television and Direct Broadcast Satellite Systems, Declaration of Robert D. Willig, Jonathan M. Orszag, and Jay Ezrielev, Filed in Conjunction With Comments Submitted to the Federal Communications Commission (MB Docket No. 04-207), July 15, 2004.

14. Store Cards Inquiry before the UK Competition Commission, Report of Robert Willig on behalf of General Electric Consumer Finance, 2/12/2005; testimony 3/4/2005.

15. Masimo Corporation v. Tyco Health Care Group L P. and Mallinckrodt, Inc.; United States District Court, Central District of California Western Division; Case Number CV02-4440 MRP; Expert Report 2/19/2004; Deposition, 4/2/2004; jury trial testimony, 3/10-11/2005.

16. In The Matter of Applications for the Transfer of Control of Licenses and Authorizations From Western Wireless Corporation to ALLTEL Corporation, Declaration of Robert D. Willig, Jonathan M. Orszag and Yair Eilat, Submitted to the Federal Communications Commission (WT Docket No. 05-50), March 29, 2005.

17. Metropolitan Intercollegiate Basketball Association v. National Collegiate Athletic Association, et al; Civil Action No. 01-0071 (MGC); Declaration, 1/16/2004; Reply Declaration 4/8/2004; Expert Report, 6/13/05; Deposition, 6/18/05.

18. In re Public Offering Fee Antitrust Litigation and Issuer Plaintiff Public Offering Fee Antitrust Litigation, In the U.S. District Court for the Southern District of New York, 98 Civ. 7890 (LMM) and 00 Civ. 7804 (LMM); Expert Report 5/25/2005; Deposition, 9/15/2005.

19. Mylan Pharmaceuticals Inc., Mylan Laboratories Inc., and UDL Laboratories Inc., v. Clifford Chance US LLP, and Clifford Chance Rogers & Wells LLP, In the United

States District Court For The Northern District Of West Virginia, Civil Action No.: 1:03 CV 16; Expert Report 3/31/2006, Deposition 7/28/2006.

20. MBDA UK Limited, BAE SYSTEMS PLC, BAE SYSTEMS Defense Limited, and BAE SYSTEMS (Dynamics) Limited v. RAYTHEON COMPANY, American Arbitration Association, AAA-ICDR Case No. 50-180-T-00462-04, Declaration 4/12/2006; Deposition 4/27/2006, Testimony 5/19/2006.

21. Tessera, Inc. v. Micron Technology, Inc. et al, In the United States District Court For The Eastern District of Texas, Marshall Division, Civil Action No. 2-05cv94, Expert Report, 6/23/2006.

22. Bob L. McIntosh and Chris Petersen (d/b/a C-K Farms) v. Monsanto Company, et al., In the United States District Court for the Eastern District of Missouri, Civil No. 4:01cv00065RWS, Expert Report, 7/10/2006, Deposition 8/23/2006.

23. The SCO Group, Inc. v. International Business Machines Corporation, In the United States District Court For The District of Utah, Civil No. 2: 03-CV-0294 DAK, Expert Report 7/17/2006, Deposition 10/6/2006.

Exhibit 2

Materials Considered

Documents and Testimony from *In re Pharmaceutical Industry Average Wholesale Price Litigation* (MDL 1456, No. 01-12257-PBS)

1. Class certification filings produced by plaintiffs
2. Expert liability reports produced by plaintiffs
3. Declarations of Experts
4. Production documents of Express Scripts, Caremark and Medco
5. Deposition Transcripts of Experts
 - a. Gaier, Eric (Nov. 15-16, 2004; April 7, 2006)
 - b. Hartman, Raymond, (Oct 7-8, 2004; Feb. 27-28, 2006; Mar. 1, 2006)
 - c. Navarro, Robert (Nov. 17, 2004)
 - d. Rosenthal, Meredith (Feb. 22-23, 2006)
 - e. Schondelmeyer, Stephen (Oct. 14-15, 2004)
 - f. White, Halbert (Nov. 29, 2004)
 - g. Young, Stephen (Nov. 18-19, 2004)
6. Deposition Transcripts and Exhibits of Caremark / AdvancePCS
 - a. Joyner, David (Sept. 23, 2004; Exhibits 1-19)
 - b. Kilgore, Geoffrey (Aug. 16, 2005; Exhibits 1-27)
 - c. Madsen, Gregory (Aug. 26, 2004; Exhibits 1-23)
 - d. Thigpen, Albert (Aug. 27, 2004; Exhibits 1-6)
7. Deposition Transcripts and Exhibits of Pharmaceutical Care Network
 - a. Duval, Lilli (Aug. 25, 2004; Exhibits 1-9)
 - b. Keane, David (Aug. 25, 2004)
8. Summary Judgment filings and related merit reports/declarations produced by plaintiffs
9. Track 1 Defendants' Daubert filing
10. Wholesaler-provided "mark-up" data, 1994 – 2005, and year end drug pricing data, 1994 – 2004 from First DataBank
11. Report of Independent Expert, Ernst R. Berndt, to Judge Patti B. Saris (Feb. 9, 2005)

Documents and Testimony from *New England Carpenters et al v. First DataBank, et al.* (No. 05-11148-PBS)

12. Production documents from Plaintiffs and Third Parties:

- a. CARP 00001 – 04302 (New England Carpenters)
- b. CARP-JB 00001 – 00839 (New England Carpenters)
- c. CIGNA/NEC 00001 – 00253 (Cigna)
- d. CMK-NECarp 000001 – 000656 (Caremark)
- e. DC37 00001 – 00869; 00869AA – 02319; 02321 – 06070; 06116 - 10463
(District Council 37)
- f. DC37-ESI001 - DC37-ESI003 (District Council 37)
- g. ESI-414-00001749 - ESI-414-00005857(Express Scripts)
- h. FDB/McKesson 000001-001644 (First DataBank)
- i. GORT 000001 – 000011 (Bernard Gorter)
- j. GPP/NEC 00001 – 04521 (General Prescription Programs)
- k. HP/NEC 0001 – 2489 (Harvard Pilgrim Health Care)
- l. HUM 0001-00319 (Humana)
- m. 00001 – 00741 (Humana)
- n. JD/NEC 00001 – 05659 (John Deere)
- o. MEDCO 000001-001746 (Medco)
- a. Mercer/NEC 00001 – 00655 (Mercer)
- p. National Medical Health Card Systems
- q. PFTHW 000001 – 002165 (Philadelphia Teachers)
- r. Pirelli-FDB 0000001 – 0001573 (Pirelli)
- s. SEGAL-CARPENTER 0000001 – 003115 (Segal)
- t. SEGAL/NEC 00001 – 13732 (Segal)
- u. SEL HLTH/NEC 0001-2337 (SelectHealth)
- v. SWAN 000001 – 000026 (June Swan)
- w. TP/NEC 0001 – 0154 (Towers Perrin)
- x. THWF 0001 – 4917 (Teamsters)
- y. Claims Data of third parties

13. Deposition Transcripts

- a. Buckley, James (Oct. 20, 2006; Nov. 7, 2006)
- b. Cannon, Eric (Oct. 11, 2006)
- c. Dowlen, Donny (Oct. 19, 2006)
- d. Einhorn, William (Oct. 5, 2006)
- e. Esperon, Rosaria (Nov. 6, 2006; Jan. 8, 2007)

- f. Fleming, William (Oct. 9, 2006)
 - g. Gibbs, Matthew (Oct. 27, 2006)
 - h. Grande, Andrea (Oct. 11, 2006)
 - i. Hartman, Raymond (Oct. 4-5, 2006)
 - j. Hayes, Susan (Oct. 26, 2006)
 - k. Kenney, James (Oct. 11, 2006)
 - l. Seymour, Earl (Oct. 19, 2006)
 - m. Steinberg, Arthur (Oct. 18, 2006)
 - n. Wong, Tina (Nov. 14, 2006)
- 14. First Amended Class Action Complaint (July 21, 2006)
 - 15. Defendant McKesson Corporation's Answer to Plaintiffs' First Amended Class Action Complaint (Aug. 7, 2006)
 - 16. Corrected Plaintiffs' Motion for Class Certification (July 27, 2006)
 - 17. Plaintiffs' Memorandum in Support of Class Certification (July 21, 2006)
 - 18. Declaration of Steve W. Berman in Support of Plaintiffs' Motion for Class Certification and Motion for Leave to File First Amended Complaint (July 21, 2006)
 - 19. Affidavit of Doreen Weber (July 14, 2006)
 - 20. Declaration of Susan A. Hayes in Support of Plaintiffs' Motion for Class Certification (July 13, 2006)
 - 21. Declaration of Raymond S. Hartman in Support of Plaintiffs' Motion for Class Certification (July 14, 2006)
 - 22. Plaintiffs' Motion for Determination of Controlling State Law (July 17, 2006)
 - 23. Plaintiffs' Memorandum in Support of a Motion for a Determination of Applicable State Law (July 17, 2006)
 - 24. Corrected [Proposed] Order Granting Plaintiffs' Motion for Class Certification (July 27, 2006)
 - 25. Notice of Filing Under Seal (Oct. 4, 2006)
 - 26. [Proposed] Order Granting Plaintiffs' Motion for Leave to File Under Seal (Oct. 4, 2006)
 - 27. Class Plaintiffs' and First Data Bank's Joint Motion for Entry of an Order (a) Granting Preliminary Approval of the First Data Bank Settlement, (b) Certifying a Class for Purposes of Settlement, (c) Directing Issuance of Notice to the Class; and (d) Scheduling a Final Fairness Hearing (Oct. 4, 2006)
 - 28. Class Plaintiffs Memorandum of Law in Support of a Joint Motion Preliminary Approval of Proposed First Data Bank Class Settlement, Certification of Settlement Class and Approval of Notice Plan (Oct. 4, 2006)

29. Affidavit of Katherine Kinsella in Support of Joint Motion Preliminary Approval of Proposed First Data Bank Class Settlement, Certification of Settlement Class and Approval of Notice Plan (Sept. 28, 2006)
30. First DataBank Settlement Notice Plan (Oct. 4, 2006)
31. Settlement Agreement and Release (Oct. 4, 2006)
32. Declaration of Gregory Madsen (Dec. 18, 2006)
33. Plaintiffs' Amended Motion for Class Certification (Dec. 20, 2006)
34. Plaintiffs' Amended Memorandum in Support of Class Certification (Dec. 20, 2006)
35. Updated Declaration of Raymond S. Hartman in Support of Plaintiffs' Motion for Class Certification (Dec. 20, 2006)
36. Plaintiffs' Proffer of Evidence Common to the Class in Support of Class Certification (Dec. 20, 2006)
37. Plaintiffs' Proposed Trial Plan for Trial of Class Claims Against McKesson Asserted in the Second Amended Complaint (Dec. 20, 2006)
38. [Proposed] Order Granting Plaintiffs' Amended Motion for Class Certification (Dec. 20, 2006)
39. Declaration of Steve Berman in Support of Plaintiffs' Amended Memorandum in Support of Class Certification and Plaintiffs' Proffer of Evidence Common to the Class, with Exhibits 1-74 (Dec. 20, 2006)
40. Luis Cabral, *Introduction to Industrial Organization* (2000)
41. Tim Bresnahan "Empirical Studies of Industries with Market Power," in *Handbook of Industrial Organization, Volume 2.*, (1989)
42. Declaration of Raymond S. Hartman, Impact and Cost Savings of *The First DataBank Settlement Agreement* (October 4, 2006)
43. Prescription Drug Benefit Cost and Plan Design Survey Report, PBMI (2005)
44. Bradford J. Holmes, "Employers Step Up The Battle On Drugs Costs", WholeView TechStrategy Research Brief, Forrester Research, Inc. (September 23, 2002)
45. The Kaiser Family Foundation and Health Research and Educational Trust, *Employer Health Benefits 2006 Annual Survey* (2006)
46. First DataBank Pricing Data (1994-2004)
47. McKesson Sales Data (2001-2004)

Figure 1
Basic Industry Structure for the Pharmaceutical Market

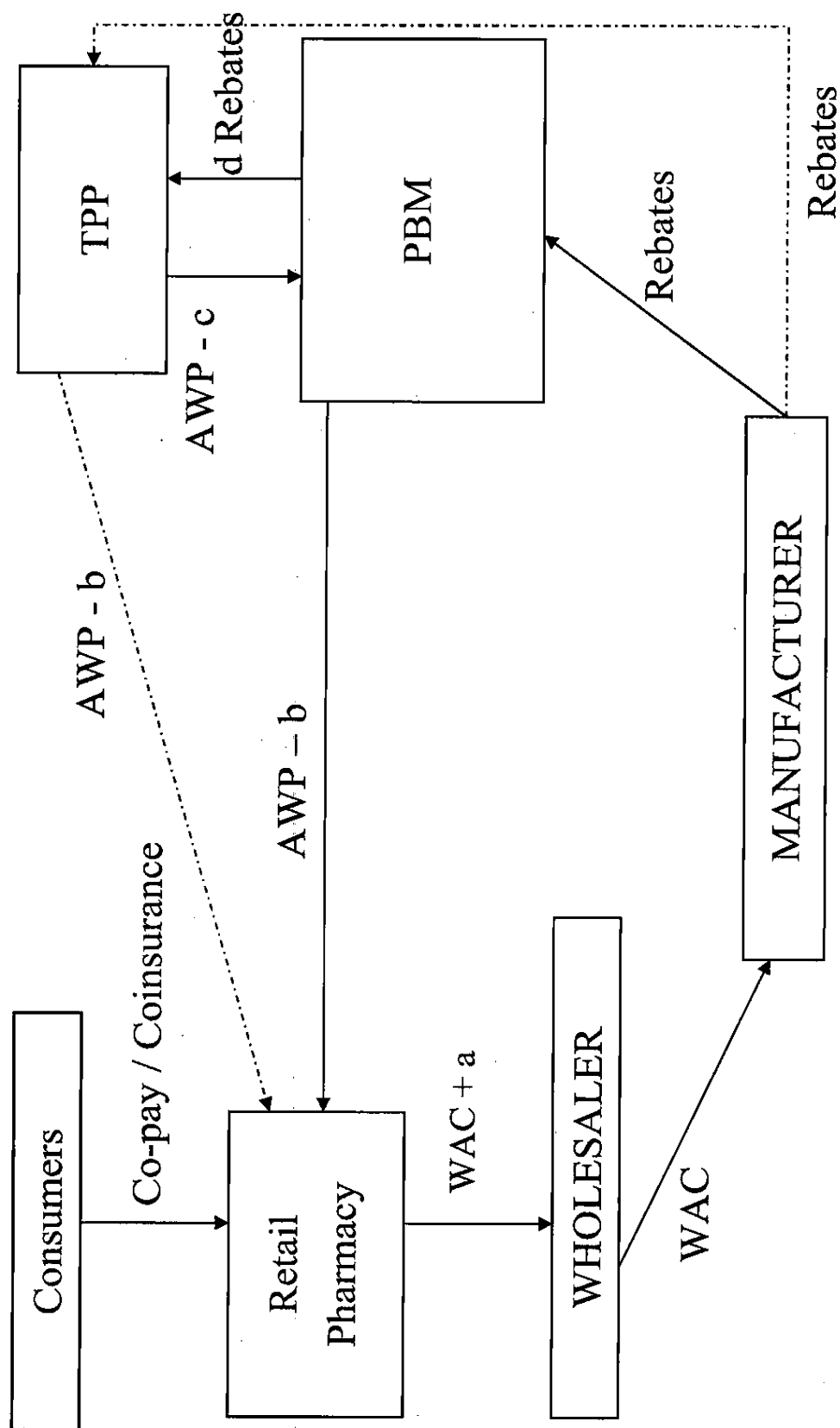


Table 1
 McKesson Sales of Self-Administered Branded Prescription Drugs
 Appendix A and Non-Appendix A
 2001-2004

Change in AWP/WAC Ratio	Appendix A Sales (millions)	Percentage of Appendix A Sales	Non-Appendix A Sales (millions)	Percentage of Non-Appendix A Sales
Stays at 1.20	4.40	0.0%	3,425.00	4.1%
Changes from 1.20 to 1.25	82,820.00	97.8%	8,646.40	10.4%
Stays at 1.25	1,264.30	1.5%	68,013.00	81.9%
Other	552.60	0.7%	2,971.20	3.6%
Total	84,641.30	100.0%	83,055.60	100.0%

Sources: First DataBank data (AWP and WAC); Total McKesson sales from 2001-2004 (dollars).

Note: The change in the AWP/WAC ratio is measured using the first appearance of an NDC in First DataBank data on 1/1/2001 or later as the initial ratio and the last AWP/WAC ratio observed through 12/31/2004 as the final ratio.

Table 2
Average Retail and Mail Order Branded Prescription Drug Reimbursement
1995 - 2004

Year	Retail		Mail	
	Average Discount	Average Dispensing Fee	Average Discount	Average Dispensing Fee
1995	11.8%	\$2.50	15.0%	\$1.82
1996	12.1%	\$2.47	15.6%	\$1.71
1997	12.6%	\$2.32	16.6%	\$1.61
1998	13.2%	\$2.35	17.1%	\$1.51
1999	13.1%	\$2.30	17.4%	\$1.38
2000	13.5%	\$2.31	18.5%	\$1.15
2001	13.9%	\$2.21	18.9%	\$1.09
2002	14.1%	\$2.13	19.7%	\$0.86
2003	14.5%	\$2.05	20.4%	\$0.52
2004	14.8%	\$1.95	21.0%	\$0.41

Source: The Prescription Drug Benefit Cost and Plan Design Survey Report (2005), p.4.

Table 3
Annual Changes in AWP for Four NDCs
January 1999 – January 2002

Drug (NDC)	Annual AWP Increases			
	Jan98–Jan99 (Ratio 1.20)	Jan99–Jan00 (Ratio 1.20)	Jan00–Jan01 (Ratio 1.20)	Jan01–Jan02 (Ratio 1.25)
Lipitor 10MG (00071015523)	3.0%	0.0%	8.3%	13.5%
Plavix 75MG (63653117101)	4.0%	6.9%	5.0%	16.9%
Prevacid 30MG (00300304613)	3.5%	3.9%	7.0%	11.5%
Wellbutrin SR 150MG (00173013555)	5.0%	9.4%	5.0%	14.3%

Source: First DataBank data (1998-2004).

Table 4
 Percentage of Covered Workers Facing Different Cost-Sharing Formulas
 for Prescription Drug Benefits, 2001-2005

	2001	2002	2003	2004	2005
Four-Tier				3%	4%
Three-Tier	41%	55%	63%	65%	70%
Two-Tier	41%	30%	23%	20%	15%
Payment is the Same Regardless of Type of Drug	18%	13%	13%	10%	8%
Other/Don't Know	1%	1%	2%	1%	2%

Source: Employer Health Benefits 2006 Annual Survey, Prescription Drug and Mental Health Benefits, The Kaiser Family Foundation and Health Research and Education Trust, Exhibit 9.2

Table 5
Average Co-pays for Generic Drugs, Preferred Drugs, Non-Preferred and Four-Tier Drugs
2001-2005

	2001	2002	2003	2004	2005
Generic	\$8	\$9	\$9	\$10	\$10
Preferred Drugs	\$15	\$17	\$19	\$21	\$22
Non-Preferred Drugs	\$20	\$25	\$29	\$33	\$35
Four-Tier Drugs				\$48	\$74

Source: Employer Health Benefits 2006 Annual Survey, Prescription Drug and Mental Health Benefits, The Kaiser Family Foundation Health Research and Education Trust, Exhibit 9.4